HOSPITAL

LONDON JOURNAL OF MEDICINE,

A MONTHLY

Record of the Medical Sciences.

APRIL 1851.—No. XXVIII.

ORIGINAL COMMUNICATIONS.

ACCOUNT OF A CASE OF SPONTANEOUS COLLAPSE OF THE ANTRUM.

By W. WHITE COOPER, Esq., F.R.C.S.; Senior Surgeon to the North London Eye Infirmary, and to the Artillery Company; Ophthalmic Surgeon to St. Mary's Hospital.

(Read before the Medical Society of London, March 1, 1851.*)*

THERE are few gentlemen engaged in the practice of our profession, who do not, once at least during their lives, meet with cases of so anomalous a character as to set at defiance all the recognised rules of science and of art. We are in the habit of terming such cases *unique;* but it would probably be more correct to regard them as examples of disease occurring only at rare intervals, and then forgotten. Notwithstanding the vast accumulations of published observations which bear testimony to the diligence and pains-taking industry of our predecessors, they can hold but an insignificant relation to the mass of knowledge which has been lost through not being placed on record. Sir Benjamin Brodie has well remarked, in one of his Introductory Discourses, that "the best part of every man's knowledge is that which he has acquired for himself, and which he can only to a limited extent communicate to others. You will spend your lives in endeavouring to add to your stores of information; you will from day to day obtain a clearer and deeper insight into the phenomena of disease; you will die at last, and three-fourths of your knowledge will die with you; and then others will run the same course. Our sciences are indeed progressive; but how much more rapid would their progress be, if all the knowledge that experience gives could be preserved." [1]

I have been led to these reflections, by the signal failure which has attended my endeavours to obtain information from published authorities on the case I am about to relate.

CASE. On the 22nd March, 1849, I was consulted by Margaret Ryan, aged 25, a strongly-built young Irish woman, who complained of a flow of tears over the cheek. Her appearance was remarkable; there was a deep depression of a purplish hue between the side of the nose and the malar bone of the left side, precisely as if a portion of the superior

[1] BRODIE, Sir B. C. Introductory Discourse, 1843.

maxillary bone had been removed. It was bounded superiorly by the inferior margin of the orbit, which partook of the depression; inferiorly by the base of the alveolar process; externally by the malar process of the superior maxillary bone and the malar bone, and mesially by the nose. The distance from the bridge of the nose to the deepest part of the depression was one inch and four tenths, or nearly one inch and a half; on the right side, the admeasurement between corresponding points was barely an inch. The angle of the mouth on the affected side was slightly directed upwards, which became more marked when she smiled. There was slight *stillicidium lachrymarum.*

History. Until seven years previously, her face had been perfectly symmetrical; but about that time she first perceived a dusky mark beneath the left eye, unattended with pain or weakness of the organ. This dusky appearance gradually extended down the face by the side of the nose, and, after a time, some flattening of the cheek became apparent. Gradually and almost imperceptibly this increased, still without any sort of pain or uneasiness, until the face had assumed the form described; but it was not until a week before I saw her that there were symptoms of discomfort in the eye and cheek, when she felt shooting pains, and was teased by the watering of the eye.

On examining her mouth, the teeth of the left side were found *in situ,* but greatly decayed, and the gums were in an unhealthy state. There was not, however, any alteration in form, either of the alveolar process or the hard palate, neither was there any obstruction in the corresponding nostril, though the patient thought it rather drier than the other. The finger recognised a deep depression in the situation of the antrum, but there was no indication either of loss of substance or destruction of bone; the cheek seemed simply to have sunk.

Thinking it possible that the decayed teeth might have something to do with these changes, I recommended extraction of the cuspid and bicuspid. This was kindly done by Mr. Alfred Canton, but not without considerable difficulty, and the fangs presented that rough appearance so indicative of periostitis. Mild astringents were prescribed for the eye, and soon after I lost sight of the patient for a time.

On the 6th June, 1850, she again applied to me, on account of the stillicidium lachrymarum, which had recommenced. No alteration in the cheek was apparent, with the exception perhaps of a somewhat darker hue of the integuments. She stated, that with trifling exceptions, she had been free from pain, and that the trickling of the tears had only returned quite recently; it subsided in a fortnight under mild astringents.

She again called upon me on the 4th of last February. A decided increase of the depression was now visible; the whole anterior wall of the maxillary sinus seemed to have sunk, causing considerable deformity. The depth of the depression continued the same, but the superficies was greater; the integuments were rather more adherent to the bone, giving a puckered appearance to the cheek; the nostril was free and unaltered in form, but thinner and less firm than the opposite, as if slightly atrophied; the alveolar process retained its figure. She informed me that she had enjoyed the best of health during the past twelve months, and had nothing to complain of, except an occasional weeping of the eye. Her present condition is that above-described.

Remarks. Until the middle of the seventeenth century, when the maxillary sinus was first fully described by our countryman, Nathaniel Highmore,[1] little was known of this osseous cavity, and less of the diseases to which it is subject. Since that time, however, able writers and good observers have not been wanting, and Bordenave,[2] Runge,[3] Jourdain,[4] Desault,[5] Deschamps,[6] Weinhold,[7] and Gensoul,[8] have left on record much

[1] Nathaniel Highmore died March 1684, aged 71.

[2] Bordenave, M. Précis d'Observations sur les Maladies du Sinus Maxillaire, Mem. de l'Acad. Roy. de Chir., tom. xii and xiii.

[3] Runge, I. H. De Morbis præcipuis Sinuum Ossis Frontis et Maxillæ Superioris, etc., 1750. Haller, Disp. Chir., tom. i.

[4] Jourdain. Traité des Dépots dans le Sinus Maxillaire, etc., 1760. Also, Traité des Maladies de la Bouche.

[5] Desault. Remarques et Observations sur les Maladies du Sinus Maxillaire. Œuvres Chirur. par Bichat.

[6] Deschamps, J. L., fils. Traité des Maladies des Fosses Nazales et de leur Sinus. 1804.

[7] Weinhold, C. A. Ideen über die abnormen Metamorphosen des Highmorshöle. 1810. Von den Krankheiten der Gesichtsknochen und ihrer Schleimhäute. 1818.

[8] Gensoul. Lettre Chirurgicale sur quelques maladies graves du Sinus Maxillaire, etc. 1833.

valuable information on the subject of diseases of the antrum; I have not, however, succeeded in finding in the works of those authors, or elsewhere, a satisfactory description of the affection under which my patient labours. The only observation, indeed, directly bearing on the point, with which I am acquainted, is in Otto's *Compendium of Pathological Anatomy*.[1] "The maxillary sinus," says he, "is either entirely wanting, or very small, according to the imperfect development of the bones; still, however, although these are perfect, the cavities may be much diminished, or even entirely destroyed by great contraction of the bones." And in a note he adds: "I at least have seen it in several cases."

It is far from easy to trace or to offer a satisfactory explanation of the changes which have taken place in the case under consideration; they partake perhaps most of the character of atrophy, as if some check had been given to the due nutrition of the parts, or to the deposition of new matter, in place of that removed in the ordinary course of life. Though the effects produced by the irritation of decayed teeth are usually the very opposite to that here presented to our notice, yet the distinct evidence of irritation borne by the diseased condition of the teeth extracted must not be lost sight of, and, in the absence of any more definite exciting cause, may possibly have originated the peculiar morbid action which has been set up; but that such an amount of alteration should have taken place without pain, and with such trifling inconvenience, is truly remarkable. It must be distinctly borne in mind that there was no sinking in of the alveolar process; *that* stood out in bold relief in consequence of the depression above, so that the diminution of the cheek was quite independent of any contraction arising from loss of teeth.

The patient was seen by Mr. Fergusson on the 28th of March, 1849, and he favoured me with the following note.

"My dear Sir,—This is a curious case; I never saw one like it. I am disposed to think that contraction of the antrum is going on, and that the anterior wall is drawing inwards so as to cause the alteration in the symmetry of the face. I cannot suggest anything.

"Yours very faithfully, Wm. Fergusson."

Mr. Stanley and Mr. Edwin Saunders have also been kind enough to make a very careful examination of the woman's face; and the former gentleman stated to me, that neither in the numerous museums which he had inspected, nor in the course of his very extensive researches with reference to diseases of bones, had he met with a similar case.

[Postscript. During the discussion which followed the reading of this paper, it was suggested by Mr. Edwin Canton, that the condition of the face might have resulted from the development of a tumour from the floor of the antrum, adherent to the anterior wall; the growth of this being arrested, and a curative process set up, it ~~would, as~~ it shrank, draw the anterior wall after it. Mr. Chippendale thought it might have arisen from the outlet of the antrum having been so stopped as to render the cavity air-tight, so that the pressure of the external atmosphere caused collapse of the bones. Mr. Pilcher mentioned instances in which he had seen appearances similar to those described follow a congenital want of symmetry, and also a case of a vascular tumour, which springing from the antrum, had caused absorption of the anterior wall, and when compressed, gave rise to the appearance of a depression in the cheek. Lastly, it was suggested, that some disease may have attacked the superior maxillary nerve, or certain of its branches, and that the atrophied condition of the parts was the result.]

19, Berkeley Square, March 1851.

[1] Otto, A. W. A Compendium of Human and Comparative Pathological Anatomy. Translated by J. F. South. 1831.

A PRACTICAL ANALYSIS OF SEVENTY CASES OF INFLAMMATORY, FUNCTIONAL, AND STRUCTURAL DISEASE OF THE HEART.

By S. SCOTT ALISON, M.D., Licentiate of the Royal College of Physicians of London.

The examples of Heart-disease of which I propose, in this communication, to give some account, are divisible into inflammatory, functional, and organic. The line has been drawn as correctly as the nature of the subject, and the difficulty of always forming an accurate diagnosis, would permit. Examples of disease may have been regarded as simply functional, which may have comprised some organic lesion; and, on the other hand, cases may have appeared to involve rather more organic change than was really present. Nevertheless, I am confident that, on the whole, the return is reasonably correct. Every exertion was made to ascertain the facts of each case, which have been faithfully recorded. Structural disease is, for the most part, the result of inflammatory or of functional disease; and it is difficult to say exactly where the one ceases, and the other commences. In making a division, I have preferred being directed rather by prominent and well marked features, than by very minute observation or elaborate reasoning.

The total number of cases of heart-disease, of which this paper treats, is seventy. Of these, three were inflammatory; twenty-five were functional; forty-two were structural.

I. INFLAMMATORY DISEASES OF THE HEART.

Respecting the cases of inflammation, a few words will suffice. They are only three in number.

Case I. This was a boy, four years of age. The form of disease was advanced pericarditis, with copious sero-purulent effusion in the pericardium, and very abundant woolly-looking deposit of lymph upon the whole exterior surface of the heart. The aortic orifice was somewhat contracted and corrugated. The patient, eleven weeks before, had been attacked with scarlet fever.[1] Anasarca occurred three weeks after. Inflammation of the left lung and pleura had likewise supervened, causing hepatisation and copious effusion into the pleura of sero-purulent fluid. The patient had been an out-door patient at a medical institution up to within a few days of his death; and he came under my care when it was too late to adopt treatment with any hope of a favourable result. This case was published in the *Medical Gazette*.[1]

Case II. This was a boy, six years old. The symptoms led me to believe that a moderate amount of inflammation of the pericardium had taken place. On the fifth day of an attack of scarlet fever, the patient was seized with severe pain in the region of the heart, and

[1] Medical Gazette, February 1845.

with violent palpitation. A small bleeding afforded great relief; and the patient recovered. Pains in the joints and anasarca followed. Recovery took place; but the impulse of the heart was long after observed to be abnormally great.[1]

Case III. A girl, ten years of age, largely made, was seized with acute rheumatism. She had had a similar attack about a year before; for which I treated her, but without venesection. The heart did not become implicated. On this occasion, she did not apply to me for several days after the commencement of the attack; and she had not been seen above once by a medical attendant. On my first examination, the "to and fro" rubbing sound was distinctly heard, and a loud sawing systolic sound, strongest at the apex of the heart, was readily perceived. Under local bleeding, the use of mercury, and quietude, the disease subsided, and the rubbing sound died away. The sawing sound was heard unimpaired while she remained under treatment, which she did for some months; and the heart's impulse remained greatly increased at the period of the last examination.

It is somewhat remarkable, and to me it appears worthy of notice here, that these three examples of inflammation of the heart, or of a part of it, comprise, with the exception of one or two doubtful ones, all the instances of that disease which I find recorded in my case-books for the last ten years, among some thousand cases of acute disease, including many examples of acute rheumatism. Minor and more insidious attacks may doubtless have escaped my observation, and have grown with time into greater importance, after having passed from under my inspection. It is a matter of uncertainty with me, whether I should refer one very interesting case of disease of the heart in an infant (to be related at a later period) to inflammatory action, or to a rupture or lesion of a valve or valves.

With respect to acute rheumatism, the results of my experience are certainly very encouraging. The example I have selected above is the only one which I have found complicating rheumatism, although my attention was early drawn to the risk of the combination, from having been myself a severe and repeated sufferer from the latter disease in my youth. In the case I have recorded, it is related that the patient was very ill attended to, and that she was in the habit of going out into the open air while suffering rheumatic disease. Under proper care, she had passed through as severe an attack a year before, without any implication whatever of the heart. It is simply to confinement to bed and to a comfortable room, to the avoidance of cold, and to ordinary and reasonable treatment, rather than to the peculiar efficacy of the mode of treatment adopted, that I ascribe this important result. I may, once for all, observe, that the treatment which I have adopted in acute rheumatism, has been, for the most part, the exhibition of alkaline purgatives, and calomel and opium; when the disease has been obstinately located, with pain and swelling and heat, the application of a few leeches; and when the circulation has been persistently and greatly excited, with flushed face, head-ache, and full strong pulse, in the young and middle-aged, the abstraction of a few ounces of blood from the arm. Few things, in the treatment of rheumatism, appear

[1] Medical Gazette, February 1845.

to me to be more conducive to immunity from cardiac complication, than strict and constant confinement to bed. So important do I consider this measure, that I always inform my patients that it is a remedial agency, and not merely a mode of rest. It tends, with its hot moist atmosphere, to the object in view, by conducing very effectually to a free action of the cutaneous excretories: it brings the blood, and its noxious contents, to the surface; it derives from internal organs, and when there is a constricted condition of the internal secreting surfaces, as those of the bowels, kidney, and lungs, by a sympathetic influence, it goes far, in many cases, to effect a salutary relaxation. In treating cases of scarlet fever, however mild, I invariably order confinement to bed, with the view of preventing any implication of the kidney, heart, or other organ. Were this practice universally adopted, fewer examples of dropsy and other complications would be observed. This appears, however, so obvious, that were it not that an able systematic writer, of great influence in this country, has stated that confinement to the house is all that is requisite for the more mild form of scarlet fever, the subject would not have been at all dwelt upon.

II. FUNCTIONAL DISEASES OF THE HEART.

It is not my intention to give a detailed account of the cases of functional disease of the heart which have come under my care, but to select for comment some of the more interesting points in their history, and to furnish some statistical results.

The cases of functional disease or disorder which have occurred to me may be divided into two classes: A. Those of increased action; B. Those of defective action.

A. INCREASED ACTION. Cases of this kind have been numerous.

CAUSES. The fifteenth year has been the lowest, and the sixtieth the highest age, at which simple over-action of the heart has been observed. Most patients were between the eighteenth and the thirtieth year. Females suffered more than males, in the proportion of two to one. Season appeared to have little influence in these cases; this differs from what was observed in the case of defective action. Climate was obviously operative in one example. The relaxing climate of India had induced palpitation of the heart in a young lady. Excessive reading for many hours during the day and night induced extraordinary over-action with debility. Anxiety of mind connected with business was the precursor of the attack in several instances. Fear was the exciting cause in one case. An elderly lady was affected with violent palpitation in consequence of apprehension during the late threatenings of the Chartists. Dissipation produced the disease in two instances. A young man "was out for some days" dancing and drinking without interruption. His attack lasted some weeks. A young woman unfortunately addicted to the habitual use of spirits in excess, was the subject of long continued palpitation of the heart, simulating organic disease. Excessive lactation was an exciting cause. A lady, desirous of delaying conception, nursed her child for fifteen months, and thereby induced syncope, followed by obstinate and alarming palpitation of the heart.

Antecedent and concurrent diseases. The nervous constitution was extremely active and sensitive in a large proportion of cases. One young woman was affected with chorea, combined with very partial hæmoptysis. Two patients suffered from hypochondriasis: which in one instance was combined with extreme activity of brain, denoted by rapid speech and rapid change of subject during conversation. Hæmaturia had taken place in two examples; in one the hæmorrhage occurred after a dose of turpentine, in the other under circumstances denoting some temporary disorder of the kidney. Anæmia with venous murmur was found in one example. Aortic murmur was heard in two cases.

Symptoms. These were much the same in all the examples of over-action. There were unusually rapid contractions of the heart, with inordinate beating against the ribs and sternum, shaking the entire thorax. In some cases the contractions of the auricles could be felt by the hand, and a few of the patients mentioned that unusual movements could be felt as high as the third and second ribs; which has led me to believe that in some instances the aorta and pulmonary arteries become the seat of inordinate mobility. A sense of distress was felt in the cardiac region, causing in the mind, at first, a considerable amount of alarm. In almost every case flatus distended the stomach; and in a few, a small quantity passing up into the œsophagus, sometimes by dint of exertion of the patient, was discharged, or, as frequently happened, greatly to the distress of the patient and to the impediment of the heart, it was arrested midway, and held by spasm above and below, and formed a small but tightly distended, and, as it were, solid bag of air. The amount of air generated in the stomach was in the case of some of the patients exceedingly great. One gentleman would for hours, with effort, belch up a large volume of gas every two or three minutes. The stomach and lower part of the œsophagus would thus find relief, but only for a minute, as the gas was immediately replaced by more. So great was the quantity of air thus generated and discharged, that it was somewhat difficult to understand how the contents of the stomach, small in quantity as they were, could produce so much air, even under circumstances the most favourable to fermentation. The over-activity of the heart, perhaps, by monopolising power, and leaving less at the disposal of the digesting organ, and the anxiety of mind, by a depressing influence communicated to the stomach, contributed much to this most distressing symptom. It was the remark of some, that if they could only get rid of the air in the stomach, they would soon be all right. This much has been said on this point, partly with a view to a certain mode of relief to be suggested at a later part of this communication. The pulse was almost without exception feeble, jerking, and small: rapidity was a constant feature. The pulse at the right wrist in one patient became imperceptible, on the assumption of the erect or even the sitting posture; the left was very feeble, yet was to be felt. The horizontal position was necessary, even during violent palpitation, to preserve the patient from an overwhelming sense of faintness. A sense of sinking and faintness was a frequent attendant, and a minor form of trembling seized the patient. Sometimes the face was pallid, and soon after greatly flushed. The

bowels were little affected. The urine, on the other hand, was signally modified. During paroxysms of palpitation, and immediately after, the urine was abundant or excessive, almost colourless, and of very low specific gravity. The gentleman who suffered so much with flatus passed urine showing no appreciable weight above that of pure water, at the rate of 5 oz. in ten minutes, during some hours. It had no taste, but had a slight odour resembling beef tea. It threw down phosphates freely on the addition of liquor ammoniæ. This urine would be succeeded next day by scanty, deep sherry-coloured urine, of high specific gravity, above 1·020. The urine in one example was, as it were, brilliantly illuminated by a profusion of crystals of the triple phosphate.

Physical Signs. These presented little remarkable. The sounds of the heart were short, smart, and loud; the first resembling the French "eu", and the second "up" pronounced hard. The impulse was greatly increased, sometimes succussing the whole or part of the thorax. Over the second rib and corresponding part of the sternum in the case of the gentleman who had suffered hypochondriasis and hæmaturia, a distinct humming sound, synchronous with the systole of the heart, was unequivocally made out, proceeding obviously from the aorta, probably in a state of moderate orgasm. No venous murmur was to be heard in the neck. It is a curious circumstance, and one which reflects light on that just related, that I was enabled to discover the same humming sound in the same parts in the sister of the patient. She too suffered from palpitation of the heart unconnected with organic disease. Her health, never robust, had recently suffered from nursing her infant.

The circumstances which aggravated the disease were exertion, emotion of the mind, full meals, and stimulating drinks. In more than one instance, wine and spirits proved very injurious. Bread in one case caused such an enormous quantity of flatus, as to be very hurtful.

Treatment. The treatment found most efficacious was the removal of exciting causes as much as possible, quietude, and sustaining the strength without causing excitement. Animal food in moderate quantity was found most suitable. When flatus was annoying, this was materially abated by giving the food cold, such as cold jelly, or cold beef tea, with only a small allowance of bread. The medicines most useful in obviating excessive action were hyoscyamus and hops, given alone or conjoined, in tincture or in extract. The bowels, when requiring assistance, were advantageously moved by means of the compound rhubarb pill, with or without a grain or half a grain of camphor. After the disease had subsided, benefit accrued to the general health from the use of vegetable tonics, followed at a later period by chalybeates. Under this treatment, with additions modified to meet the specialities of particular cases, all the patients did well, and none in the end gave any reason to fear the actual commencement of organic alteration.

The horizontal posture was found in more cases than one to make the patient more tolerant of the heart's excessive palpitation, and appeared to favour its subsidence. This posture, however, was sometimes eagerly exchanged for the sitting position during flatulent distress and during efforts to discharge air through the œsophagus. It appears to me that this relief from the horizontal posture was procured by

a reduction of the labour or effort required to be made by the heart, secured by the more ready passage of the blood along a horizontal, than upwards through a vertical tube.

B. Defective action. Several examples of defective action of the heart have come under my notice, but they have presented very few points of interest. The defective action was manifested in weak and fewer contractions of the heart, for the most part accompanied by a greater or less degree of faintness or sinking. The heart's contractions would occasionally cease for a few seconds, causing to the patient a sense of stoppage and fulness at the heart. The sounds of the heart were low but clear. The pulse was of good size, soft, compressible, and often intermittent. Flatus in the stomach, and pallidity of face, were common.

Causes. Fatigue was a very common cause of defective action. Anxiety of mind and sudden emotion have for some moments appeared to suspend the heart's action. Adults only suffered; the sexes in much the same proportion. The heat of summer and autumn caused the attack in several patients. In the summer of 1846, when the heat was very great, some bad cases occurred.

Treatment. Cold ammonia and spirits were found to give relief at first. This was advantageously followed by tonics. Rest from labour was found necessary; and, in some instances, great advantage followed removal into the country, and exposure to the cool breeze, when that could be secured. The horizontal posture was so serviceable, that it was almost involuntarily assumed by the sufferers.

Besides the idiopathic cases of defective action of the heart, I have found in several examples of disease of the brain and medulla spinalis, indicating softening and inaction of these parts, a very decided and very unequivocal debility of the heart. This is somewhat interesting; and I therefore shall proceed to notice one or two examples.

A young married lady consulted me about eight years ago on account of a constant tremor of the eyelids of one eye, and twitching of one angle of the mouth, together with pain at the coccyx on sitting down or on attempting to rise. Rapid and silly talking suggested a weakly brain. The general health was excellent, the face was florid, the body altogether in a state of embonpoint, but the pulse was remarkably feeble and compressible. Disease of the brain and medulla spinalis was suspected. The tremor and twitchings passed off, but reduced sensation soon after occurred, and the patient is now little above the level of an idiot, and can with difficulty stand or creep round a table. The action of the heart is exceedingly feeble; the sounds are low. The pulse ranges about sixty, and is remarkable for want of force.

A gentleman lately called to consult me for dimness of sight and headache. He was drowsy and very fat. The heart's action was remarkably feeble for such a man; and though he was evidently of a full habit, and accustomed to a full meal and little work, I on this account avoided more depletion than I believed necessary to save him from an attack of apoplexy. He improved greatly, but some months afterwards he was seized with a fit, and fell down. A great deal of brandy was

given by the attendant who was called in, and the disease was said to be something of the nature of syncope. Good living was recommended; but the fits have since recurred several times, and they are reported by the attendant in the country to be allied to epilepsy. The patient's mind is weakened, and he is unable to perform the duties of his station.

The same debility of heart's action was remarked at the very commencement of an insidious illness which terminated, some months ago, in the death of the patient in a lunatic asylum. Silence observed to his newly-married wife, and debility, were the first indications of disease. His articulation became slow and faltering. Insanity, approaching idiotcy, was soon after established. The patient was a gentleman of forty years of age, and previously in excellent health. The debility of heart and pulse continued to the last.

III. STRUCTURAL DISEASE OF THE HEART.

Forty-two examples of organic disease of the heart, of which some account is now to be given, include nearly all the cases which have come under my notice for some years. They may therefore be taken as a fair specimen of heart-disease in a physician's practice, and of what the young physician may expect to meet. With only three exceptions, all the sufferers came under my own care. Most of them remained under treatment for some time, and most of the deaths occurred under my own notice. Some of the patients are still living, and under treatment. In these instances, the present age has been given, and the duration of the disease calculated up to this time. In other examples, these points are given at the time of patients coming under treatment. The three patients, not under my treatment, were Nos. 31, 32, and 33, in the general table. No. 33 had been under the care of Dr. Budd, in King's College Hospital. He died in a private house, and I was requested to be present at the examination of the body. The particulars of the patient's symptoms, etc., were taken from the Hospital Book, by the kind permission of Dr. Budd. No. 32 was the patient of a student connected with the Northern Dispensary: I examined the heart and great vessels. The particulars, on other points, are derived from the student. No. 31 was a patient of Dr. Willis, whom I assisted at the autopsy. A considerable proportion of these cases were seen by other physicians, either before or during my attendance.

In the arrangement of my materials, I have, for greater conciseness as well as for more ready comparison, placed many points in a general table. Facts, of little importance in themselves, become of great import in relation to a number of examples of disease. Thus, to know that dissipation and exposure were noted in one fatal case is comparatively of little consequence; but that *all* the patients, of whom this was recorded, ultimately died, is a collective fact of great significance, and is practically suggestive.

Some special points of interest, in different examples, were observed, and are thought worthy of record. These, as well as some observations on the pathology and treatment of organic disease of the heart, require separate notice.

TABLE SHOWING THE AGES OF THE ENTIRE PATIENTS.

Years.	3	9	10	17	18	20	22	25	26	32	34	36	40	43	47
No. Cases.	1	1	2	1	2	2	1	1	3	1	1	2	5	2	1

Years.	49	50	55	57	59	60	61	62	65	72	73	75	80
No. Cases.	2	1	1	1	1	1	2	2	1	1	1	1	1

This proves that organic alteration of the heart is not unfrequently met with in early life. Nine cases occurred at and under twenty years of age. Of the forty-two patients, twenty-two were males, and twenty females.

Of the forty-two cases of organic disease of the heart, seventeen terminated fatally. Of these thirteen were males, and four were females.

TABLE SHOWING AGES AT WHICH DEATH OCCURRED.

Years	17	34	35	36	40	47	49	59	61	62	65	73	75	80
No. Cases.	1	1	1	1	2	1	2	1	1	2	1	1	1	1

Total..... 17

TABLE SHOWING THE CHARACTER OF LIFE OF 42 PATIENTS.

Character of Life.	Exposure.	Exposure and Dissipation.	Dissipation	Violent Exertions.	Viol. Exert. and Dissip.	Dissolute.	Sedentary.	Comfortable.	Destitute.
No. Cases.	8	4	2	6	1	1	1	18	1

Of the eight patients, whose lives were exposed, three suffered simply from hypertrophy; one from hypertrophy with disease of mitral valve; one from hypertrophy, with calcareous deposit in aortic and mitral valves, with great thickening of the endocardium; one from hypertrophy and dilatation; and two simply from dilatation. Three died, and five were relieved. Of the four patients, whose lives were marked by exposure and dissipation, two suffered simply from hypertrophy; one from hypertrophy, and calcareous deposit in the aortic valves; and one from hypertrophy, dilatation, and mitral valve disease. All four died. Of the two patients who come under the head of dissipation, one suffered from dilatation, and soft fatty attenuated condition of heart; the other, from hypertrophy and dilatation. Both died. Of the six patients, whose life had been marked by violent exertions, four died, and two were relieved. Aneurism of the aorta accompanied the disease of the heart in one of the examples. The patient, whose life was one of dissipation and violent exertions, was relieved. The form of his disease was hypertrophy. The dissolute patient suffered from hypertrophy, with steatomatous deposit in aorta etc. He died. The sedentary patient's affection was hypertrophy and dilatation, and it was relieved.

Of the eighteen patients, the chief characteristic of whose life was comfort, fourteen were relieved, and three died; in one case no result is found noted. The destitute patient was relieved.

From these facts it appears, that the most unfavourable circumstances in the mode of life are dissipation, and dissipation conjoined with exposure.

Symptoms. The form of the disease varied so frequently, that it is difficult to give a distinct, and, at the same time, a concise summary of it. Reference to each case is therefore recommended. The same remark and recommendation apply to the physical signs and symptoms.

The pulse, for the most part, fell greatly in force below the force of the heart's impulse. It was almost invariably very weak and intermittent in mitral valve disease. In two examples (Nos. 12 and 14), those of two girls, aged ten and eighteen years, the pulse was regular; and this was probably owing to greater natural vigour at that time of life. The intermittent and irregular pulse has been observed to become regular under unusual excitement of the circulation; and, on the other hand, the nearly regular pulse has become extremely irregular and intermittent under the increased excitement of the heart.

Antecedent Disease. Certain morbid conditions co-existed with, or occurred antecedently to, the accession of disease of the heart, as far as could be ascertained, in thirty-one of the forty-two patients. In respect to eleven, nothing was made out. Seven had suffered from rheumatism on one or more occasions; one from that disease, and distortion of the thorax; five from inflammation in the chest; two from metritis and white-leg following parturition; one from miscarriage, causing great debility; two from distortions of the thorax; one from a contusion of the chest from a kick from a horse; one from gout with deposit; one from scarlet fever; one from colica pictonum; one from laryngismus stridulus; one from fever in India; one from bad health from infancy; one from general weakness; one from gonorrhœa, with hernia humoralis; one from bad development of skeleton; one from bad development and small-pox; one from abscesses in loins; and one from rapid and great distortion of skeleton.

Rheumatism maintains its character as a frequent cause; and the exanthematous diseases exhibit the same relation, though certainly to a much smaller extent. Small-pox and scarlet-fever are found as antecedent diseases, under circumstances suggesting their operation as causes. I believe that rheumatism and some febrile diseases frequently produce disease of the heart from a culpable neglect of moderate precaution. One of the patients came to the Northern Dispensary, suffering from acute rheumatism and pericarditis, with "to and fro sound", and loud internal murmur. A little boy, who died under my care of pericarditis with sero-purulent effusion consequent upon scarlet-fever, had been carried as an out-patient to an hospital till within a few days of his death. Laryngismus stridulus evidently induced the disease in a child when only six months old. Valvular disease was discovered during his convalescence. Palpitation had been remarked occasionally, while the breath was suspended, which it often was for about a minute as completely as if the glottis had been entirely closed by the hand. It was thought at first that the valves of the pulmonary artery had been lacerated by accumulation of blood in the vessel; but the integrity of the patient's respiration, and freedom from blueness, with the extraordinary loudness of the valvular sound at the present time, three years from the

date of his illness, rather refer the lesion to the aortic valves; which probably during the disturbance of the circulation and respiration produced by the fits, which were accompanied, moreover, by severe general convulsions, became the seat of inflammatory action, ending in effusion of lymph, and in permanent alteration of the valves. Distortion of the thorax, cramping the heart and impeding its action, was obviously instrumental in the production of the disease in a few examples. Gymnastic exercises were apparently operative to the same end in the case of a young man. Metritis, with swelled leg, was antecedent in two cases; and it is not unlikely that the inflammation of the veins was propagated to the heart, and resulted in the morbid alteration which there took place. Rapid and very great distortion of the spine and thorax certainly evoked a murmur, if it did not *cause* valvular disease, and probably contributed to the alteration of the walls of the heart. "Inflammation in the chest" was antecedent in some instances; and it is very probable that the heart became implicated in the more general affection, and ultimately led to the morbid alteration observed. In a few examples no cause could be satisfactorily made out. It has often happened, in regard to disease of the heart, as well as in regard to disease generally, that I have failed to obtain an explanation of its occurrence; and it has always appeared to me more likely to advance our knowledge to confess this, than, on slight and fallacious grounds, to adopt this or that as its ascertained cause.

Classification of the Cases. The forty-two cases of organic disease of the heart, which have been tabulated, present many points for comparison, each of which might serve as the basis of classification. But, as this is a practical communication, the point which I have selected as the ground of division of these cases, is one of obvious practical utility, viz., the limitation of the disease to the heart itself, or the implication of other organs, as indicated by the destruction of the general health, the occurrence of dropsy, of reiterated hæmorrhage, or other grave contingencies. This classification will, in fact, be one, first, of twenty cases, confined, as far as has yet been ascertained from their history, to the heart itself; and, secondly, of twenty-two with grave and probably incurable complications of distant organs. Perhaps it would not be inaccurate to say, that while the one group has attained the length of the second stage, the other has proceeded no farther than the first.

In practice, such an arrangement of examples of diseases of the heart, though it boasts nothing whatever of the distinctions of morbid anatomy, and demands no nice power of minute diagnosis, attainable only by long practice, is, nevertheless, calculated to subserve the great end of medical science, perhaps more than any other. It is not my object to disparage the divisions founded on the nature of the morbid alterations, or on the localisation of the disease. Such divisions as those of hypertrophy, of dilatation, and valvular obstruction, are doubtless of vast interest and importance; but they are so much more in a pathological than in a therapeutic point of view.

That the division I have here made is superior, for the direction of the treatment, to that founded on the nature of the morbid alteration, will appear from a reference to the cases. The morbid changes usu-

ally made the grounds of division, are found almost equally in the two groups of cases. Thus we find hypertrophy alike in the very formidable and in the merely local examples. We find valvular disease with abnormal sounds, in several examples of mere local disease, though of long duration, as well as in the cases involving serious complications in other parts of the body.

To know that the heart is enlarged, and that its walls are thickened or attenuated, is doubtless important and interesting; but, if the physician makes this the chief object of his search, and believes that, in diagnosing correctly between thickening and thinning, he has made out the most important facts of the case, he is greatly deceived, and in practice he will assuredly fail to be as useful as he might be. These conditions, in themselves, afford very indifferent guides in practice; and, indeed, are to be found in examples of disease requiring greatly diversified treatment. I believe that, in thus commenting upon this classification, I may be useful to the student and young physician, by inducing them to regard, at least in practice, rather the broad and obvious requirements of disease, as known by its limitation to the heart, or by its distant implications, than the nature or extent of the morbid alteration in the thickness of the heart's walls,—important though that be, particularly in a pathological point of view.

This classification is, like every other, embarrassed with its drawbacks. The case which is to day complicated with hæmorrhage, or, it may be, dropsy, may, ere long, under judicious treatment, be deprived of these adjuncts; and the disease, limited at present to the heart, may ere long involve distant organs. Still, though the arrangement of the case must be changed, we have the guides for treatment.

The presence of *valvular disease* forms a good pathological ground for classification. It is, for the most part, readily detected by the presence of abnormal sounds. Of the forty-two cases, thirteen gave evidence of valvular disease by abnormal bruits. Abnormal sounds were heard in six of the local examples, viz., cases 1, 11, 12, 13, 14, and 16; and in seven of the cases accompanied with complications, viz., cases 22, 23, 26, 31, 33, 35, and 37. But valvular disease is a sign of little value, both in respect of treatment and prognosis. We find it alike in the slightest and the most severe and advanced examples of disease; and the auscultatory signs of its presence are not always to be heard. Valvular sounds, which had at an early period been well made out, would at a later period become altogether, or for a time, inaudible. This probably arose from reduced force of the heart's action no longer being sufficient to propel the blood with sufficient force, and not by any means, as the over-sanguine might conclude, from the removal of the obstructing parts under the influence of treatment. The intensity of the valvular murmur did not always correspond with the amount of disease of the heart, or with the importance of the valvular alteration. The vigour of the heart's action, as well as youth and good general health, seemed to contribute largely to the intensity: the sounds in the limited or local examples were of the loudest. On the other hand, valvular disease, of great importance, connected with very great alteration of the heart, was present in one example, without any murmur having been heard at any time, though diligently sought for.

Any grouping of the cases on the basis of the thickness of the walls

of the heart, will here prove of very little value; the alteration in this particular being much the same in examples requiring very different treatment.

An important division of cases of organic alteration of the heart would be one founded on the healthy firm character, or the disorganized, soft, broken-down alteration of the walls of the heart. But, in practice, it is difficult to diagnose these conditions by physical signs, and we are compelled to have recourse to symptoms, and the general condition of the body. Now, for the most part, the healthy firm heart is found only in the more limited cases, and the disorganized heart is seen only in the complicated examples; so that the division first noticed in this paper will practically be also one of,—first, firm and vigorous structure; and second, of disorganised, soft, inefficient tissue, this being, in my opinion, the most formidable and important alteration, and the prevention and arrest of which is a main indication. So very generally is the heart found firm, or moderately firm, and vigorous, in those examples of disease which still remain free from general breaking up of the health, hæmorrhage, and dropsy, and so commonly is the heart found softened and disorganised in its muscular parts, in those cases marked by these grave contingencies, that I am disposed, in a general way, to regard the first condition as the first stage, and the second condition as the second stage of the same disease; using the word *disease* in a wide and comprehensive sense, and acknowledging it to display manifold varieties, as well as to possess a certain unity of character.

A. Local Cases. The ages of the patients, whose disease was chiefly local, are arranged in the following table in quinquennial periods.

Ages.	0 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 30	30 to 35	35 to 40	40 to 45	45 to 50	50 to 55	55 to 60	60 to 65	65 to 70	70 to 75	80
No. of Cases.	1	3	0	4	2	3	1	1	2	0	0	0	1	0	1	1

The average age of the patients is about thirty years. With regard to the sexes, eleven were females, and nine were males. The greater proportion of females, in this list, may possibly be explained on the supposition that the greater care they take of their health, their more protected mode of life, and their greater freedom from hard labour and dissipation, contributed greatly to arrest the development of disease beyond the primarily suffering organ. The duration of the disease varied from two months to twenty years; and as the period could not be accurately determined in some cases, it may have lasted even longer. This shews, that organic disease of the heart may not only permit the patient to survive many years, but that without hæmorrhage, dropsy, or permanent damage to the general health; in short, with very limited suffering. The observations of Dr. C. J. B. Williams (London Journal of Medicine, April and May 1850) and Dr. R. H. Semple (*Ibid.* November 1850) tend to shew that heart-disease is, in itself, not so incompatible with long life as is often supposed. The interesting cases, recorded by the latter gentleman, prove still more:

they shew that patients may attain old age, with a considerable degree of comfort, even with long-standing apparently formidable valvular disease.

The form of alteration of the walls of the heart, in ten examples, was hypertrophy; in ten, it was hypertrophy combined with dilatation. Of this group of twenty cases, six were marked by abnormal valvular sounds.

The results of these cases were exceedingly satisfactory. Relief was afforded in every case. In some the benefit was great, and promised to be lasting. Death occurred in one example only, that of an octogenarian; and this proceeded more from great and rapid distortion of the body, than from disease of the heart.

B. Complicated Cases. The ages of the patients whose disease extended beyond the primarily affected organ, whose general health was materially injured, and who suffered from dropsy or hæmorrhage, may be classified as under, in quinquennial periods.

Ages.	15 to 20	20 to 25	25 to 30	30 to 35	35 to 40	40 to 45	45 to 50	50 to 55	55 to 60	60 to 65	65 to 70	70 to 75
No. of Cases.	1	0	0	1	6	0	4	1	3	4	0	2

The average age was about fifty years. This is much higher than the average age of the patients suffering only from local disease, viz., thirty years; and is what might have been anticipated, because the progress of years is calculated to convert local into general and complicated disease, and because disease of the heart, at an advanced age, is likely to meet with less resistance than in comparative youth, when the powers of life are yet abundant, and the tissues are firmer, and possessed of more elasticity.

Of the twenty-two patients suffering from hæmorrhage, or dropsy, or both, thirteen were males, and nine were females. Thus males suffered more than females, which is the reverse of what was observed in respect to merely local disease; eleven females, and nine males, making up the number of patients more lightly afflicted.

TABLE SHEWING DURATION OF COMPLICATED CASES.

Duration.	Some Months.	2 Yrs.	3 Yrs.	7 Yrs.	8 Yrs.	20 Yrs.	27 Yrs.	40 Yrs.	Some Years.	Many Years.
No. Cases.	3	1	3	1	1	1	1	1	6	4

The duration of each case, with the exception of a few still under treatment, is given only up to the time when it first came under my notice. Some of the patients lived for some years after. Care was taken to obtain the most correct information on this as on every other point; and it may be regarded, if not as absolutely precise, still as a very near approach to it. With respect to the instances of long duration, viz., twenty, twenty-seven, and forty years, there is no doubt whatever of the accuracy of the information. The patients were all intelligent and trustworthy men. One was the father of a medical friend, not likely to be deceived; and his testimony was corroborated

by examination after death. The gentleman, who had been ill forty years, was a particularly intelligent Scotchman, till within a few months of his death serving with his regiment in the West Indies. He distinctly assured me that he had suffered from disease of the heart for forty years, and that the extraordinary palpitation, which I have endeavoured to describe, was wont to attack him during the whole of that long series of years.

The form of alteration of the walls of the heart, in the twenty-two complicated cases, is seen in the subjoined table.

Alteration.	Hypertrophy.	Dilatation.	Hypert. & Dilat.	Uncertain.
No. Cases.	11	3	7	1

In seven of the twenty-two cases, valvular or abnormal bruits were made out. This is rather more frequent than in the more limited cases; in only six of which were abnormal sounds heard. The results, as might be anticipated, were, in this group of cases, greatly less satisfactory than in the other. Sixteen of the cases terminated fatally: six of the patients were relieved.

Concurrent Diseases. Congestion was the first implication of other organs; and in the examples before us it was, almost without exception, passive. The head was congested in some instances, from the obstructed venous circulation. In only one or two was the congestion at all of an active character, and then it arose more from the agitated condition of the body, and the impurity of the blood, than from any undue violence with which the diseased heart discharged the current of blood. A very anæmic condition of the system did not prevent a patient (No. 36) from suffering much from this complication.

Congestion of the kidney has obviously been instrumental in the production of dropsy. It has destroyed the tone of the organ, and ultimately so injured its vitality as greatly to interfere with its due secretion. This has received much countenance, from the urine becoming more abundant when hæmorrhage has taken place.

Of the forty-two patients, eighteen suffered from head affections, embracing various forms of disease, including active and passive congestion, convulsions, coma, delirium, and headache.

Twenty patients were affected with disease of the lungs and bronchi. Ten suffered from congestion of lungs; one from congestion of bronchi; one from emphysema and black, old tubercles; one from emphysema and chronic bronchitis; two from chronic bronchitis; one from œdema; one from hepatization; one from probable œdema; one from displacement of lung by enlarged liver; one from tubercles and cavities; one from tubercles; one from emphysema, œdema, congestion, and chronic bronchitis.

Of the twenty-two patients, thirteen suffered from hæmorrhage in one form or another. Eight suffered from hæmoptysis, one from hæmoptysis, hæmatemesis and melæna, two from melæna, one from hæmorrhage from bowels, and one from hæmorrhage from bowels and hæmoptysis. In case No. 21, it was remarked that the urine was albuminous until melæna occurred, when the albumen disappeared from the urine; but as soon as the melæna ceased, the urine again became albuminous.

Spontaneous hæmorrhage has afforded great and immediate, if not very lasting benefit to some of the patients. It has done this by relieving congestion, and thus withdrawing one of the obstacles to free secretion. This has been observed even when the blood has been scanty, or highly diluted. Perhaps the benefit from this natural or spontaneous bleeding may not be without a wholesome suggestion to those who, ever eager to adopt every novel doctrine, though opposed to the well tested experience of ages, on all occasions, to the detriment of the sick, and to the injury of a noble calling, repudiate the assistance of the now too much disparaged lancet.

TABLE SHOWING THE RELATIONS OF DROPSY WITH HÆMORRHAGE, ETC.

No. as in general able.	Dropsy.	Hæmorrhage.	Liver.	Kidneys.	Result.
21	Œdema of feet.	Hæmoptysis, hæmatem., melæna.	No disease.	Kidneys only rather small, albuminuria.	Death.
22	Ascites, œdema of feet.	None.	Great hydatid tumour.	No disease.	Death.
23	Ascites, anasarca of legs.	None.	Enlargement.	No disease.	Death.
24	Œdema of feet.	Hæmoptysis.	No disease.	No disease.	Relief.
25	Anasarca of legs.	Melæna.	No disease.	No disease.	Death.
26	Ascites to great extent; anasarca of legs & hands.	None.	Cirrhose.	No disease.	Death.
27	None.	Melæna.	No disease.	No disease.	Relieved.
28	None.	Slight hæmoptysis.	No disease.	No disease.	Relieved.
29	Ascites to great extent, hydrothorax, hydropericardium, œdema of lungs; anasarca of legs.	None.	Cirrhose.	No disease.	Death.
30	Great anas. of legs; œd. of lungs.	Hæmorrhage from bowels.	No disease made out.	No disease made out.	Death.
31	Hydrothorax, ascites, anas. legs.	None.	Cirrhose to great extent.	No disease.	Death.
32	None.	None.	Cirrhose.	Bright's disease in first stage.	Death.
33	Œdema of face.	Hæmoptysis, aneu. of aorta.	No disease.	No disease.	Death.
34	Ascites, œdema of feet.	None.	No disease made out.	No disease.	Relief.
35	Hydrothorax, ascites.	None.	Diseased.	No disease recorded.	Death.
36	Ascites, anasarca general.	From bowels, hæmoptysis.	Great enlargement.	No disease.	Death.
37	Anasarca, great.	None.	No disease.	No disease made out, albuminu. 2 or 3 occasions.	Death.
38	None.	Hæmoptysis.	No disease.	No disease.	Much rel.
39	Hydrothorax, anasarca of legs.	None.	Congestion.	Cyst containing tubercular matt.	Death.
40	None.	Hæmoptysis.	None made out	No disease.	Relieved.
41	Hydrothorax, anasarca of legs.	None.	No disease.	No disease.	Death.
42	Œdema of feet.	None.	No disease.	No disease.	Death.

Dropsy was intimately connected with the soft, flabby, inefficient, disorganised heart. There was reason to believe that dropsy was the effect; but there is ground also to believe that the general effusion of serous fluid into the tissues again materially aided the further progress of the disorganisation of the heart.

Of the twenty-two patients in the second division of the table, seventeen suffered from dropsy in one form or another; three from œdema of the feet;[1] two from œdema of feet and ascites; one from ascites and anasarca of legs; two from anasarca of legs; one from ascites and anasarca of hands and legs; one from anasarca of legs, ascites, hydrothorax, and hydropericardium; one from anasarca of legs, hydrothorax, and ascites; one from œdema of face; one from hydrothorax and ascites; one from ascites and anasarca; one from anasarca; and two from hydrothorax and anasarca of legs.

From the above table it appears that out of seventeen cases in which dropsy occurred, fifteen terminated fatally. In some cases, the amount of dropsy was slight, and the effusion was confined to a part. In others, the amount was great, and different parts formed its seats. In five cases, hydrothorax occurred; in one, hydropericardium. The effusion was confined to the face in the case conjoined with aneurism of the ascending aorta. Ascites took place in eight cases; and it is remarkable that in six of them there was found organic disease of the liver. While this teaches that ascites may be looked for more frequently where there is organic disease of the liver, it also suggests the practical precaution, when ascites occurs, of looking beyond the liver, and of ascertaining the condition of the heart.

Besides the facts given in the tables, there are a few connected with these cases which are too important to be altogether passed over.

One of the first facts of importance which suggests itself to my mind, is the frequency in which I found that disease of the heart had not been made out until a very late period, in some examples only a very short time before death, although there was good ground to believe that the disease had been of considerable duration. In some instances, this has arisen from inattention to obvious evidence; in others, from the absence of some of the more common indications, such as palpitation, pain or oppression, particularly in the region of the heart, or from the impulse and sounds of the heart being in some measure obscured by effusion in the lung or pleura, or by emphysema. In some examples, it is not unlikely that it arose from a current but fallacious idea that there must necessarily be heard, in organic disease, abnormal bruits and marked alteration of the sounds of the heart; and that when these are not made out, symptoms alone, such as palpitation, blue face, dyspnœa, dilated veins, etc., are to go for little or nothing. One gentleman (No. 39 in the general table) had the sounds and impulse of heart so masked by emphysema and œdema of the lungs, together with much flatus in the stomach, that his disease, great as it was, was not made out by two of the oldest physicians in town, who had attended within a short time of his death. The feeling of the patient in respect to the stomach being the chief seat of disorder, may

[1] One case of slight recent œdema of the feet in a patient aged 80, remains in the first table.

likewise be operative in leading to this error. A patient (No. 37 in the general table) spoke so confidently of his disease being merely "wind in the stomach", that I felt it my duty to inform him that it was much more serious; but he apparently treated my information on this point as unworthy of consideration.

The anæmic venous murmur in the neck, which had been distinctly heard in case No. 36, before the jugular veins became greatly dilated, and the seat of regurgitation, on the occurrence of these conditions was no longer heard, although the blood continued fully as much diluted. This cessation was probably due to the subtraction of one of the necessary conditions for the production of the sound; viz., a certain amount of rapidity of current.

Diagnosis. The diagnosis in advanced organic disease is, for the most part, sufficiently easy; though, as we have seen, even great alteration may be marked by emphysema, œdema, or flatus. A careful examination of the impulse and the sounds, of the patient's narrative, and of his general condition, will leave little room for doubt. But it is otherwise in the commencement of those examples of disease, unproclaimed by valvular murmur, or by recent acute inflammation, and attended by no very obvious alteration of the impulse, sounds and rhythm of the heart, alteration in the colour of the blood, or dyspnœa, not referrible to disease of the lungs and bronchi themselves. The difficulty is indeed great, in such cases, to decide at one examination of the patient at the physician's house. I have generally found the heart, when only functionally affected, to be very agitated on the first visit of the patient, and to convey to the hand the feeling of an enlarged organ. It is well, under such circumstances, not to proceed at once to the examination, but cheerfully to divert the patient's mind, and to have a second, or even a third examination. If we still find the impulse beyond its normal force and boundaries, we are scarcely warranted in allowing humanity, or a regard for the patient's feelings, to lead us to assure him that there is no disease. Whenever disease, though moderate, has been diagnosed, I have deemed it my duty to inform the patient of it. A contrary course would have compromised his interest, by interfering with suitable and persistent treatment; and the risk of evil from apprehension has been avoided, by explaining that disease of the heart is manageable; that it is, for the most part, contrary to general opinion, not remarkable for its rapidity of course, or for the suddenness of its termination. After all, it is often more a matter of curiosity than of real importance to the patient, to decide whether the heart is or is not what is usually called organically altered; for we find the worst consequences, such as venous congestion, dropsy, and death itself, following very moderate change; while, on the other hand, persons have lived for many years with great alteration, both of valves and walls, without heart-disease having been even suspected, and have ultimately died of other affections, to reveal after death, for the first time, the true condition of the great central organ.[1] If there is, how-

[1] For an illustration of this fact, see Dr. Semple's paper on Diseases of the Heart, in the London Journal of Medicine for November 1850.

ever, one condition that it is important to diagnose, it is the soft flabby inefficient heart: that is, of all other changes, the most important; and it signifies little whether or not it be conjoined with enlargement or valvular alteration. In this form of disease, the sounds are weak, and the pulse intermittent, irregular, and feeble. But the blue or pallid countenance, the continuous dyspnœa, the tendency to œdema, the general debility, and the softness and weakness of the voluntary muscles, will greatly assist the diagnosis. Amongst the first symptoms of disease of the heart I have found a moderate amount of pretty constant dyspnœa, with a sense of stoppage at the left nipple, followed by a knock. These symptoms have led, in some instances, to the diagnosis of heart-disease formerly unsuspected.

Prognosis. The prognosis, judging from the cases given in this paper, may be favourable when there is no very great narrowing of the outlets, when the heart is still possessed of tone, and when the patient is young and in fair general health, and when the disease is confined to the heart. Youth enables the suffering organ, for the most part, to maintain a suitable balance between increased obstruction to the propulsion of the blood, and the increased force demanded. The heart becomes larger and more powerful in its contractions. The prognosis is unfavourable when there is great obstruction or inefficiency of valve, permitting regurgitation into the veins, when passive congestion takes place in the viscera, and dropsy manifests itself. When the heart has become soft and flabby with very inefficient action, especially if conjoined with anæmia, there remains little or no prospect of lasting improvement. Persistent dropsy and repeated hæmorrhage argue a fatal termination. Old age and enfeebled health afford little resistance to the increased difficulties of the circulation. If the heart becomes larger, it is chiefly by dilatation and mechanical extension, aided by a soft expansile and atonic muscular structure, and marked by false movements, alike unfavourable to the currents of blood to the heart, and to the discharge of blood from it.

Treatment. In the treatment of those examples in the disease which was confined to the heart, the indications which were kept in view, were:—1st. The abatement of inflammatory action, even in the most mitigated forms, by the application of leeches, counter-irritation, and the usual measures. 2nd. The abatement of inordinate action, by the use of harmless sedatives, such as hyoscyamus, and conium, or lactucarium. When the action was great, and attended with pain, morphia was administered. When quieting was required at the same time that a tonic was admissible, hop was administered with great advantage: it was usual to continue its use for weeks, often in combination with a bitter infusion. When vigour was wanted, and there was no extreme irritability, iron was found to afford lasting advantage.

In the treatment of the more serious cases, those complicated with congestion, hæmorrhage, dropsy, etc., the objects of the treatment were more numerous.

A heart organically altered is not incapable of inflammatory action. It was therefore necessary, on some occasions, to adopt measures against this evil. But great care was taken not unnecessarily to tax the powers of the system.

When congestion occurred, the treatment consisted in gently soliciting the secretions of the part affected, if a secreting organ; if the head or lungs were affected, a few leeches, or the cupping glasses, were applied in the neighbourhood; and when circumstances would admit, mild purgatives were employed. The congestion of the brain, in one example, was so great in consequence of regurgitation, that, though the patient was anæmic, it was deemed necessary, in order to save him from an attack of apoplexy, to open a vein in the arm, and draw two or three ounces of blood. The result was satisfactory. The patient was immediately relieved from severe pain, and an almost delirious state; and no obvious increase of debility followed.

In these examples very violent palpitation occasionally occurs, causing pain, dyspnœa, and extreme anxiety. The stronger sedatives, such as morphia, are then demanded. The effect of morphia, under such circumstances, has been most gratifying; a quivering heart, with rapid and extremely small and irregular pulse, has within an hour been changed into a comparatively quiet and efficient organ, with a soft, full formed, calm pulse. Under such quieting treatment I have known even very marked regurgitation of the jugular veins to disappear; the venous blood finding a more ready passage through a better working engine. For constant use, to prevent inordinate over-action, the tincture of hop has proved of inestimable value.

Dropsy demanded much attention. When it depended on congestion from direct heart obstruction, the saline purgatives and diuretics were administered. When a slight stimulus was admissible, the spirit of nitrous ether was added. These means, for the most part, gave some relief. When dropsy depended on debility, as it did in some examples towards their fatal termination, the evil was met by the use of spirits of ether, in a little infusion of broom tea and squills, supported by the moderate employment of Hollands.

In those examples of dropsy dependent on visceral congestion, as not a few were, an attempt was made to remove this secondary condition. When the liver was obstructed, a few leeches were applied over it, and mercurials administered according to the resources of the patient. When the kidney was congested, little good followed the use of diuretics. When all other means failed to relieve pressing dropsical swelling, recourse was had to the formation of an artificial outlet in two cases, and with manifest advantage. One of these cases was ascites; the other, general anasarca. No evil whatever resulted. In the case of anasarca, small incisions were made along the legs, and the fluid trickled out for days, until the whole dropsical effusion was got rid of, much to the comfort of the patient. The adjoining integument was besmeared with some simple ointment, and the leg was enveloped in dry, soft, chamois leather, which imbibed the fluid as it escaped, and formed a bland warm application to the limb; a happy exchange for hard irritating linen cloths.

In dropsical effusion, extraordinary benefit has been observed to follow the use of mercury in some of these examples, as well as in other cases. When œdema of lungs has threatened, a few grains of blue pill, combined with squills, have afforded great relief to the respiration and much increased the flow of urine. When the whole catalogue of diu-

retics had in vain been tried, and scarcely an ounce of urine would be passed in twenty-four hours, with increasing effusion in the different cavities and in the cellular tissue, it has appeared desirable to restore the urinary secretion, even at some cost to the patient. Mercury under these circumstances has been administered, but with varied results. One circumstance commonly noticed has been the difficulty of affecting the gums; extraordinary quantities of mercury have been given before the slightest effect has been produced upon those parts. The difficulty has been, for the most part, proportioned to the obstruction of the circulation and the debility of the patient. When the gums have been at last affected with the red mercurial line, and the health has become slightly touched, then the urinary secretion has, in some instances, been surprisingly and suddenly rendered abundant. In example No. 36, in which anæmia existed, the gums, notwithstanding the long and free use of calomel and blue pill, remained pale and like white wax. At length a faint red line fringed the gums; this was the signal for the urine to flow in almost incredible amount. One day, I left the patient to pay a visit to Boulogne; he was then an enormously swollen man, lying very ill in bed. In three days I returned; he met me in the lobby, a thin and emaciated person; so great was the change, that I jocularly inquired of him how my patient up-stairs was going on, affecting not to recognise him. The gums had become tender, the mercury had told in some extraordinary way upon the effusion, and in three days had totally removed it, although every variety of diuretic and every contrivance had been employed for this object, for weeks, in vain. After a lapse of some considerable time, the dropsy and suppressed urine returned, but again to be removed by mercury. Dropsy finally established itself again, and the patient died in the country thoroughly exhausted. Did the mercury primarily act upon the kidney? did it excite the absorbents to increased activity? did it so act upon the heart as to cause it to operate with more efficiency upon the mass of blood and urge it along more readily in its hitherto reluctant and retarded course, unloading the distended and inactive veins, and filling the empty arteries, so as to supply an increased pabulum to the secreting organs whence the secretions might be withdrawn? or did it for a time mitigate visceral obstructions? In one way or another, it appeared that the pabulum supplied to the kidneys, in common with other organs, was increased at this time, for the pulse was decidedly larger than before.

The stomach presented some disorders for rectification. Irritability and vomiting required treatment. When the ordinary means failed, recourse was had to the use of ices, with extraordinary benefit. Iced mint tea was very grateful, and contributed to abate vomiting. Flatus proved the source of great distress to several patients. Various carminatives were employed, but with very partial and varied success. Purgatives afforded most relief. The examination of the body of No. 39 revealed such an enormously distended stomach, as fully to explain the great sufferings of the patient from flatulence. When the walls of the abdomen were divided, the stomach rose up in bold relief, an enormous bag of air, far above the other organs. It occurred to me, on reflecting on this condition of the stomach, and the great distress it caused the

patient, who always maintained "it was only his stomach", that it would have afforded the sufferer great relief if a narrow elastic tube had been passed down the œsophagus, and had given vent to the pent-up gas.

I believe that such an instrument might under similar circumstances give great, though possibly only temporary relief. For a time, at least, it would comfort the patient, and give the heart more room to act. It is not impossible, moreover, that more than temporary advantages might result from it. Relieved from continued distension, the stomach might regain some of its long-lost tone, and less readily permit the evolution of gas, and more willingly contract upon it and cause its expulsion. I had lately an opportunity of observing how relief from long-continued distension of an organ will restore its tone and contractility. A gentleman, aged 40, consulted me for incontinence of urine of many years' duration. It had caused him and his family very great annoyance. I introduced a catheter into the bladder, more for the purpose of exploring the urethra than of emptying that organ; a large quantity of urine came away. Next time I saw him, he was extremely delighted to inform me, that ever since I had passed the catheter, he had made water as well as he had ever done in his life, instead of his urine constantly dribbling away from him. Instead of incontinence, he had distension; and the temporary relief afforded by the catheter, led to a complete cure. It is not too much to hope, that some similar advantage might follow the discharge of the long pent-up air in a distended stomach. Mr. Coxeter of Grafton-street has supplied me with an instrument, but I have not yet had the opportunity of testing its value in practice.

It is a highly important indication to retain the heart in a state of good muscular tone; and where this has given way to weakness and atony, to restore it as far as it is practicable. To retain the vigour of the heart is chiefly an object in cases of disease uncomplicated with secondary disease; for where these have occurred, the heart is, for the most part, found to be already greatly reduced in strength and efficiency. The means of effecting this object, in the more local examples, has been already noticed. If judiciously employed, they may prevent the accession altogether of the more advanced stage, or, at least, abate its progress. Fortunately we have means within our reach by which the advancement of softening and relaxation, when already begun, may be controlled; and even, under favourable circumstances, to a certain extent corrected. Amongst the foremost of these means may be ranked a sound liberal diet, comprising a large proportion of red fresh animal food, with, where circumstances connected with the health and constitution of the patient will permit, a little sound light wine; pure air; moderate exercise and driving; vegetable and mineral tonics, including sulphuric and nitric acids; and above all such tonics, for continuous use, particularly where anæmia is present, and there is freedom from irritability of the stomach, the various preparations of iron recommended in my work on its beneficial employment in such cases. One other great means of equalising the demand made upon the heart and its ability, besides doing what we can to strengthen that organ, is to relieve it as far as possible of its labour. The adoption of the recumbent or semi-recumbent posture for half

an hour, two or three times in the course of the day, will go far to prevent the still somewhat vigorous organ becoming flaccid, and give the flaccid organ a period of comparative rest, and an opportunity to recruit itself. I have reason to know that this practice has proved of essential service, and, for the most part, it is not ungrateful to the patient. Cold sponging proves of great service in this direction, and even cold bathing, in some cases, I believe would prove highly beneficial: but care would be required in the selection of examples adapted for its employment.

A course of moderate counter-irritation, at the region of the heart, has proved of great service. It has certainly kept pain in check; and has appeared to regulate action, and retard the progress of morbid growth. It is well effected by means of chamois leather dipped in linimentum ammoniæ.

TABULAR VIEW OF FORTY-TWO CASES OF A. TWENTY

No.	Name.	Age and Sex.	Habits of Life.	Family Disease.	Antecedent Diseases.	Duration of Disease.	Form of Disease.
1	M. C.	10, F.	Comfortable.	None recorded.	Acute rheumatism, twice, treated without loss of blood.	Three months.	Hypertrophy, with mitral valve alteration.
2	M. L.	61, F.	Exposure.	None.	Weakness and chronic bronchitis for years.	Probably some years.	Dilatation.
3	T. C.	26, M.	Habitual excess in spirits; violent exertions; shaking the person in twisting hair.	None.	Gonorrhœa five years ago, followed by hernia humoralis, leaving to this time swelling of testes.	Two years; but aggravation two last mths.	Hypertrophy.
4	M. S.	25, F.	Quiet; comfortable.	Father died of ossified heart, aged 70.	"Frequent attacks of infl. in lt. side of chest," treated with leeches and blisters.	Two years.	Hypertrophy and dilatation.
5	J. C.	26, M.	Comfortable.	None.	Acute rheumatism in joints and muscles, six years ago; not tr. for a week, then removed to hosp., where had leeches appld. to region of heart.	Six years.	Hypertrophy and dilatation.
6	B.	72, F.	Expos. to cold, wet, and steam.	None.	Gout, with deposit in hands, during last 14 years.	Ten years.	Dilatation and hypertrophy.
7	J. J.	9, M.	Quiet; comfortable.	None recorded.	Scarlet fever immediately before, during wh. pleurisy, leaving slight hepatisation of left lung.	Some weeks.	Moderate hypertrophy.

In conclusion I shall add, that the treatment to be as successful as it should be, the nature of each case must be made out, the broad indications recognized, and the most efficient and simple means of fulfilling them suitably employed. With this rule reduced to practice, the formalities of routine may be dispensed with. The necessarily limited character of a communication of this kind prevents my alluding to many topics of great therapeutic interest which I otherwise should gladly have touched upon. The same want of space has reluctantly prevented my referring to the valuable contributions, on the same subject, made by many eminent members of the profession. In further apology for this omission, I have to remind my readers that I have not aimed at the higher office of writing a treatise, but simply proposed to occupy the humbler field of relating some of my own observations.

Park Street, Grósvenor Square, March 1851.

STRUCTURAL DISEASE OF THE HEART.

SIMPLE CASES.

Physical Signs.	Symptoms.	Treatment.	Effects of Treatment.	Result.
Impulse much increased, fremissement cataire, loud systolic murmur.	Much palpitation.	Not recorded.	Not recorded.	Not recorded.
Sounds loud, situs of heart increased; heart's contractions weak, disturbed; p. very intermittent.	Palpitation, moderate dyspnœa; occasional pain in head.	Hyoscy. for dyspnœa & palpit., pil. rhei c. to regulate bowels, lin. terebin. for bronchitis.	Improved considerably.	Improved.
Unusual succussion of præcordial region, impulse greatly increased, situs increased; first sound strong and rough.	Great palpitation, faint feeling at heart; moderate dyspnœa; p. weak, small, compressible; dyspepsia and flatus.	For recent aggrava., six leeches to præcardia, digit. hyoscy., sulp. magnesiæ, leeches repeated, Plummer's pill.	Was greatly relieved of urgent symptoms.	Relieved.
Tremor of ribs, great impulse, situs much increased, sounds strong.	Violent palpitation, dyspnœa; p. small, firm, intermittent.	At first leeches to præcordia, digitalis intern., subseq. prep. of iron.	No benefit followed the applicat. of leeches and the administration of digitalis; gen. health was much imprvd., and palpit. reduced by iron.	Health improved and local symptoms mitigated.
Trembling of ribs, situs increased, apex felt at seventh rib; impulse increased, and as if heart were unusually hard.	Palpita.; weak small pulse.	Rhubarb and magnesia, subseq. chalybeates.	Not recorded.	Not recorded.
Situs of heart increased, impulse increased; sounds loud; dilated veins in neck.	Palpitation, dyspnœa, cough, weak pulse.	Vegetable tonics, spir. of nit. ether.	General health improved, and local symptoms relieved.	Relief.
Situs and impulse moderately increased; veins of neck dilated; præcordial region more prominent than corresponding part of opposite side.	Palpitation; p. regular, weaker at right wrist than at left; moderate lividity of face.	Hydrarg. c. cretâ, carb. sodæ, hyoscy. first few days, subseq. iodide of iron.	Secretions improved and palpitation abated under first part of treatment; general health greatly restored by the latter portion.	Much relieved.

No.	Name.	Age and Sex.	Habits of Life.	Family Disease.	Antecedent Diseases.	Duration of Disease.	Form of Disease.
8	M.	43, F.	Comfortable.	—	Rheumatism 17 years ago; injury of the right foot 12 yrs. ago; hence considerable lateral distortion of spine, raising right shoulder 3 inches above left.	Eleven years.	Hypertrophy.
9	S.	32, F.	Comfortable.	Rickets, small development.	Inflammation in chest when 8 years old. Bony fabric has been ill developed.	Fifteen years.	Hypertrophy and dilatation to a moderate extent.
10	W.	36, F.	Sedentary.	Rickets.	Bony fabric ill developed, short and contracted. Slight distortion of cervical spine in early childhood.	From childhood.	Hypertrophy and dilatation.
11	R. L.	18, M.	Violent exertions; temperate.	—	None.	Some years.	Hypertrophy, dilat., aortic valvular disease, and aortic aneurism?
12	S. S.	10, F.	Comfortable.	—	Acute rheumatism a year ago; a second attack 2 months ago, during which heart became implicated; ill attended to, and permitted to go out of doors; no bleeding till heart implicated.	Two months.	Mitral valve disease; moderate hypertrophy.
13	H. M.	3½, M.	Comfortable.	Parents highly nervous.	Spasmodic croup, very severe, and continuing some weeks, causing convulsions for some days. Disease induced by feeding, occurred 4 months before heart disease discovered. Influenza during croup.	Three years.	Disease of valves; moderate hypertrophy.

Physical Signs.	Symptoms.	Treatment.	Effects of Treatment.	Result.
Impulse increased in force and in situs, sounds dull. Heart displaced to right of sternum by distortion of spine, and contraction of left side of thorax.	Much palpitation for years, constant dyspn.; weakness; small pulse, 100; flatus.	Rhub. and soda to improve secretions, vegetable tonics, foll. by iron.	Health improved much; the benefit from the use of iron was very marked; the palpitation was nearly removed, and the increased impulse was greatly abated.	Much relieved.
Impulse of heart constantly increased, slightly in force, greatly in extent. Sounds rather dull, jugular veins dilated.	Palpitation, violent and frequent; pulse weak, intermitt.; slight congestion of head; headache.	Iron.	Patient gained much strength from use of iron; health was greatly improved during some years from commencement of treatment, and was the same when patient was last seen.	Relieved.
Situs of heart increased, impulse increased in force. Jugular veins dilated; intermittent action.	Palpitation, intermittent pulse, dyspnœa; moderate debility; oppression in head; much flatus.	Leeches over ht. to reduce suspected congestive action, hyoscy. intern., and cataplasm of morphia to præcordia for same purpose, purgatives.	Patient derived great advantage from this treatment; palpitation greatly reduced, so was the oppression in head; morphia acted well as a sedative; a removal to country made disease of heart almost disappear.	Great relief.
Situs of heart increased, impulse extended, action heaving; slight soufflet accompany. systole, heard at 2nd and 3rd ribs on left side; left clavicle slightly elevated, 2nd & 3rd ribs bulging; sounds of heart low.	Violent palpitation, pain in region of heart; intermit. very weak pulse; sibilus at second and third ribs.	Leeches at first, then saline laxatives, followed by vegetable tonics.	The pain at heart, which had followed great exertion, was reduced by leeches and salines, and the general health was subsequently established by tonics and country air; three years after the patient was no worse.	Relief.
Loud systolic sound resembling "ha", breathed very loud, loudest at apex, extending to third rib; increased action of heart.	Sense of pain; palpitation; disturbed health; p. weak, regular.	Numer. leeches to præcordia immediately, calom., Dover's powder, and colchi., iodide of iron.	Under first part of treatment, pain and inordinate action greatly abated, and pyrectic sympts. removed; iron gave vigour and "patience" to heart and improved general health; sound became greatly less loud and harsh.	Relief.
Very loud systolic sound, very prolonged, resembling "ha" harshly breathed out, masking first sound, and rendering second sound difficult to be heard; loudest at sternum, level with third rib; but heard nearly over the entire chest; moderate increase of heart's situs & impulse; veins of neck rather full.	Moderate continuous over-action of heart; no other symptoms whatever; pulse regular, good size, and firm.	Pure air, a wet-nurse at first, occasional residence in the country, no medicine.	Has enjoyed good health, and has grown a fine blooming boy; but sound is the same, and action of heart still preternaturally great.	Perfect health.

No.	Name.	Age and Sex.	Habits of Life.	Family Disease.	Antecedent Diseases.	Duration of Disease.	Form of Disease.
14	E. B.	18, F.	Destitute.	—	General debility, bad development. Small-pox in infancy. No rheumatism.	Some years.	Mitral valve disease; moderate hypertrophy.
15	E.	43, F.	Comfortable.	—	Large abscesses in groin, and in loins, discharging quarts of pus, now healed.	Six months certain, but probably more.	Dilatation; moderate hypertrophy.
16	S.	80, F.	Comfortable.	None.	Recent contus. of hip; great distortn. of spine, begun only a few weeks back, throwing the chin upon the right clavicle; obliterating the neck, distorting thorax, and reducing entire length about one quarter, rendering patient, formerly very tall, very short.	Unknown; discovered only a week or two before death.	Valvular dis., with hypertrophy. Aortic outlet reduced by distortion of chest.
17	J. C.	20, M.	Comfortable.	Weakly health.	Distortion of thorax begun in childhood, has increased latterly; thorax at heart decidedly depressed, to right of sternum protuberant.	Some years.	Moderate hypertro., from moderate distortion of thorax.
18	W. E.	20, M.	Comfortable.	—	None.	Congenital.	Moderate hypertrophy.
19	C.	22, M.	Gymnastic exercises.	—	None. Front of thorax unduly prominent, from gymnastics.	Some years.	Moderate hypertro. from gymnastic exercises.
20	B.	26, M.	Exposure to cold.	Delicate health.	General delicacy from childhood. Moderate malformation of chest, with deficiency of left side. Want of beard and whiskers: singularly youthful appearance.	Some years.	Moderate hypertro., with excited action, connected with malformation of chest, and deficient lft. side.

Physical Signs.	Symptoms.	Treatment.	Effects of Treatment.	Result.
Loud hissing sound replaces first sound; impulse of heart increased.	Papit., dyspnœa, cough, P. somewhat weak, regul., weakness, pain in head, cong. of lung., vom. from irritab., occas. looseness.	Tincture of hops, with gentian infu.	Vomiting allayed, general health improved, and less palpitation.	Relief.
Impulse increased in force and extent; sounds clear.	Palpit. very severe and frequent, dyspn., weakness, P. small, hard, regular, some pain in heart formerly, occas. vomiting.	Morphia, for pain in heart, on one or two occas., conium and hyoscy. internally, & lin. ammo. and leeches exter., to abate palpitat.	Pain held in check with morphia; palpitation much reduced by other treatment.	Relief.
Loud systolic bellows sound, loudest a little above nipple; impulse increased; veins of exterior of chest dilated.	Moderate excitement of heart, recent œdema of feet.	Mild diuretics, hyoscyamus.	Nothing was attempted in this case but to relieve symptoms.	Died a week or two after valvular murmur discovered. No necropsy.
Impulse strong, heaving, and unduly extended; sounds rather dull.	Palpit., faintness, weak pulse, intermittent; occasional trifling hæmoptys.; moderate dyspeps.	Tonics, country air, exercise, iron.	No hæmoptysis of late, general health is improved, and over-action of heart moderated.	Relieved so as to attend to business.
Impulse decidedly increased in extent and force; sounds rather dull.	Occas. palpitation; occas. pain in region of heart; health good, pulse strong.	Pil. conii., moderate exercise and exertion, pure air and good diet.	Pain removed, palpitation somewhat reduced.	Over-action of heart moderated.
Impulse decidedly increased in extent and force; and action heaving.	Palpitation occasionally, over-action constant., occasional faintness; P. weak, pallor of counten., pains in region of heart.	Quietude, sedatives, chalybeates, abstinence from gymnastics.	Palpitation reduced, but over-action continues, general health improved, less faintness.	Improved.
Impulse increased in force and extent; heart is felt beating on right side of sternum, in which direction it is forced by depression of left side at præcordia.	Fits of palpitat., constant over-act., moder. dyspnœa, with dry rhonchus; pallor, feeble rapid pulse., irritability of stomach & vomiting; great emaciation and debility; irritability of bowels from jalap, &c., chronic bronchitis, dry rhonchus.	Small dose of calomel with hyoscyamus and aloes at first, followed by hyoscyamus and camphor, hops and liq. opii, lin. terebinth. externally, iron.	Extraordinary benefit from treatment, no vomiting, though fits of palpitation; constant action of heart reduced, P. quiet, stronger, T. clean, appetite enormous, patient and friends astonished at change, death being soon apprehended. The tinct. of hops with liq. opii was particularly useful in allaying irritability of stomach and supporting system; iron is well tolerated and is giving bloom to face.	Symptoms relieved to only moderate extent; over-action of heart.

B. TWENTY-TWO CASES,

No.	Name.	Age and Sex.	Habits of Life.	Family Disease.	Antecedent Diseases.	Duration of Disease.	Form of Disease.	Physical Signs.
21	C.	49, M.	Sea-faring; exposure, dissipation.	No record.	Fever in India. Fistula in ano.	Probably many years; only now discovered.	Hypertrophy, without orificial alteration.	Action heaving, situs increased, impulse increased, pulse hard, jugular veins dilated and pulsating.
22	N.	75, M.	Laborious; spare living.	Scrofula in family.	General delicacy from infancy, symptoms resembl. those of gall stones. Indigestion, pneumonia.	Probably many years.	Hypertrophy, ossification of aortic valves.	Action strong, heaving; impulse increased, situs increased. P. hard, veins of neck much dilated. Heart's sounds rough; murmur with 1st sound, inaudible before death.
23	R. C.	17, M.	Exposed to weather.	Rheumatism.	Acute rheumatism four years before, treated with leeches to chest.	Known for two years.	Immense hypertrophy, with mitral valve disease.	Apex of heart felt beating at 8th rib; impulse very great. Precordial region prominent; 1st sound a loud prolonged rasp. Pulse weak, irregular, forms abruptly.
24	C. W.	40, F.	Exposed to cold and wet.	Consumption.	Inflammation in chest from cold.	Three years.	Dilatation, with weakness.	Action of heart masked by respiratory sounds. P. very irregular, weak.
25	J. B.	62, F.	Comfortable.	Rheumatism.	Two miscarriages, causing great debility, slight hæmoptysis 4 years ago.	Twenty years.	Hypertrophy, with dilatation, roughness of aortic valves.	Impulse increased, situs increased, 1st sound rough, jugular veins dilated. P. firm, small, slightly intermittent.
26	J. W.	61, M.	Exposure to cold, dissipation.	Consumption.	Rheumatism on several occasions, hæmorrhoidal dischrg. frequently till four years ago.	Three and a half years.	Hypertrophy, ossification of aortic valves with spicula.	Impulse increased, blowing systolic sound; jugular veins dilated.
27	C.	50, F.	Quiet, comfortable.	None.	Repeated attacks of inflammation in chest, fever.	Many years.	Hypertrophy.	Situs and impulse of heart increased, 1st sound rough, jugular veins dilated.
28	M. F.	40, F.	Exposure to cold and wet.	None.	No disease.	Three years.	Hypertrophy.	Situs from 3rd and 7th rib and to right of sternum. Impulse increased; 1st sound loud, rough.

WITH SERIOUS COMPLICATIONS.

Symptoms.	Complications.	Treatment.	Effects of Treatment.	Result.	Autopsy.
Palpitation, dyspnœa, exhaustion.	Active congestion of head; contr. pupils; cong. of lungs, with dry rhonchus; albuminuria, alternating with melæna; hæmoptysis formerly, lately hæmatemesis, now melæna; œdema of feet; flatus and vomiting.	Hydrocyanic acid for stom.; cupping at back for lung-congestion.	The patient being in an almost dying state when first seen, profited little by treatment.	Died in a few days.	Heart nearly double usual size, orifices healthy, liver healthy, kidneys rather small.
Dyspnœa, palpitation.	Passive cong. of head, headache, dil. pupils, emphys. lungs, left lobe of liver filled with hydatids, œdema of feet, ascites, flatus, eructations.	Hyoscyamus. The hydatid tumour rendered the heart disease of only secondary importance.	Only moderate relief to dyspnœa, and palpitation reduced by hyoscyamus.	Death.	Heart double the size of patient's fist, walls thickened, aortic valves ossified so as neither to open or close perfectly.
Dyspnœa, palpitation, debility.	Anas. of legs, sloughing of integuments, ascites; liver's edge 2 in. below cartil.: jaundice; much flatus.	Mercury for liver; iron to strengthen system and heart; greatly weakened by previous loss of blood by leeches.	Under care of a well-known physician, breathed through a tube for a long period, but to no account; mercury reduced liver, removed jaundice; iron restored the general health and invigorated heart's action for some years.	Died some years after.	None. Through an omission on the part of the gentleman entrusted with the case, during indisposition of the writer, the opportunity of making an examination was lost.
Palpitation, dyspnœa.	Œdema of feet and emphysema, chron. bronch., occas. hæmopt., flatus.	Preparations of iron.	Very striking improvement in the general health, and in respect of the chest followed the treatment.	Greatly relieved when last seen.	
Palpitation, dyspnœa, pallor, exhaustion.	Anas., melæna, oppress. in head, cong. of lungs, flatus.	Tonics, spirits of nitrous ether, brandy.	Material benefit from treatment.	Died in a few months.	No examination was permitted.
Great exhaustion, much dyspnœa, violent palpitation.	Albuminuria, extens. ascites, anas. of legs and hands, congest. of head, atrophy and cirrhosis of liver; flatus and vomiting.	Spirits of nitrous ether in broom tea.	The patient being in a dying state when first seen, little or no relief was afforded.	Died in two days.	Heart's wall enlarged, cavities increased somewhat, heart weighed 25 oz., pericardium adherent, aortic valves had ossific deposit with spicula, pleural adhesions, cirrhosis, liver weighed 2 lbs. 9 oz., omentum much shrunk; tubercle size of pigeon's egg, containing tuberculous matter, in right kidney; peritoneal covering of liver and spleen thickened and white.
Palpitation, dyspnœa.	Urine scanty, melæna, passive cong. of head, cong. of lungs.	Vegetable tonics and spirits of nitrous ether.	Health much improved.	Health improved.	
Violent palpitation, great dyspnœa, strong large pulse.	Occas. slight hæmopt., great cong. and throbbing of art. in head, with suicidal tendency.	Leeches to præcordia; hyoscyamus.	Treatment afforded much relief.	Much relieved.	

No.	Name.	Age and Sex.	Habits of Life.	Family Disease.	Antecedent Diseases.	Duration of Disease.	Form of Disease.	Physical Signs.
29	G. T.	62, M.	Violent exertions.	None.	Contusion of breast from kick of horse.	Twenty-seven years.	Dilatation without orificial alteration.	Situs increased, im pulse ordinary, soun loud.
30	J. G.	36, M.	Very violent exertions as a coal-heaver.	None recorded.	None recorded.	Probably some months.	Not clearly made out.	Not well explore Further examinati was postponed, on c count of the unwash state of the perso till next day, but dea prevented further i vestigation.
31	B.	47, M.	Great excess in use of brandy for years.	None recorded.	None recorded.	Probably some years.	Great dilatation; attenuated, soft, and fatty walls; aortic & mitral valves ossified.	A bellows sound a companied syste Pulsation of jugular
32	E. C.	55, M.	Dissolute.	——	None.	Years.	Hypertrophy, softening.	None reported.
33	W. S.	49, M.	Laborious.	——	Colica pictonum from employment as a painter.	Believed by patient to be nine months.	Great enlargement and dilatation, with immense aneurism of aorta.	Projection on ri of sternum, back 2nd, 3rd, 4th ribs, bu ing of heart's regi Heart's sounds we systolic bellows sou loudest at 3rd rib, c stolic sound prolong with slight soufflet

Symptoms.	Complications.	Treatment.	Effects of Treatment.	Result.	Autopsy.
Palpitation, fluttering of heart, dyspnœa, exhaustion, P. rapid, weak, regular.	Anas. of legs, extens. œdema, mod. hydrothorax and hydropericard., œd. of lungs, cong. of brain, epilepsy (15 years), liver mod. cirrhosed, much flatus.	Spirits of nitrous ether, broom tea, calomel, and squills.	Patient was obviously sinking when first seen, and as he died in two days the treatment was of no use.	Died in two days after first visit.	Pericardium healthy, contained 2 oz. reddish serum; heart voluminous, size of extended hand and fingers; walls soft, not thickened; cavities enlarged; orifices and valves healthy; some reddish serum in both pleuræ; œdema of lungs; they were soft, and felt like a polypus, smooth, and when cut into, discharged red serum; red serous fluid in peritoneum; liver atrophied, hardened with streaks of white coagulated lymph pervading its structure; peritoneal cavity rough and adherent; spleen small and hardened; stomach & intestines congested.
Dyspnœa for some months, of late orthopnœa, veins of neck dilated, P. rapid, weak, sinking.	Great anas. of lower extrem. (5 wks.), œdem. of lungs, occasion. hæm. fr. bowels, stup. some days, convulsions before death.	Spirits of nitrous ether, broom tea, calomel, and squills; cordials; supporting diet.	No result from treatment.	Died in two days.	
Great dyspnœa, sinking.	Anas. of legs, mod. hydrothorax and ascites, cong. of head, with sense of oppression; liver enlarged, right lung pushed up, cong. of stom., flatus, vomiting.	Not recorded.	Not recorded.	Death.	Much subintegumentary fat; heart of large volume, with all the chambers unusually capacious, covered in front with much fat, very soft breaking down under the fingers, like soft liver, of dark colour; the columnæ carneæ were the only muscular parts of the right ventricle; calcareous deposit, size of a barleycorn, in mitral valve; tricuspid and pulmonary valves healthy; cirrhose of liver, w. hob-nailed surface; gt. enlargt. rising on right side to near the 3rd rib; a few oz. of gravy soup-looking serum found both in thorax and abdomen; lungs greatly gorged with dark blood, and thrust up to the superior part of chest, on right side by liver, and on the left by the enld. hrt., and the stom. greatly dis. with gas.
No special symptoms.	Bright's dis. of kidney in first stage, tubercles and cavities in right lung, liver enlar. and hard.	Not recorded.	None.	Death.	Particulars already given in part. Prostrate gland enlarged; heart enlarged and soft; aorta presented numerous patches of steatomatous deposit.
Sense of throbbing at heart, feeling of pricking and smarting at right shoulder and in arm, cough, dyspnœa, hæmoptysis, food appeared to be arrested three or four inches down æsophagus, emaciation, œdema of face.	Œdem. of face, cong. of lungs, hæmoptysis.	V. S. Leeches over heart; morphia.	Pain and cough much relieved by bleeding; morphia afforded sleep and comfort.	Death.	Great enlargement of heart, walls somewhat thickened, chambers enlarged, valves healthy, aneurism of ascending aorta, size of a child's head.

No.	Name.	Age and Sex.	Habits of Life.	Family Diseases.	Antecedent Disease.	Duration of Disease.	Form of Disease.	Physical Signs.
34	H.	57, F.	Comfortable.	——	Metritis; white leg seven years ago, after accouchement.	Seven years.	Hypertrophy.	Situs of heart creased, impulse creased, action he ing, sounds dull.
35	W.	34, F.	Comfortable.	——	Two miscarriages, the last followed by inflam. of womb and white leg. No rheumatism.	Fourteen months.	Mitral valve disease, dilatation, hypertrophy.	Systolic sound rese bling the word "wh softly pronounc loudest at 6th rib. I pulse increased in fo and extent, veins neck dilated.
36	H. W.	40, M.	Dissipated. Excess in spirits.	None.	None known.	Some years.	Hypertrophy, dilatation, tumultuous action.	Impulse increas unduly extende sounds dull. No normal sounds. Di ation and regurgi tion of jugulars, nous murmurs fr anæmia.
37	V.	59, M.	Exposure to cold. Excess in spirits in early manhood.	None recorded.	None recorded.	Probably many years.	Hypertrophy, dilatation, mitral valve disease.	Impulse increasec force and exte sounds dull; slight b lows murmur, loud at apex, systolic. weak, intermittent, ruptly formed. B face.
38	B.	40, F.	Comfortable.	None.	Acute rheumatism.	Eight years.	Hypertrophy and dilatation.	Impulse greatly tended, moderately creased in for sounds dull. Pro tion of ribs at ap pulsating.
39	F. G.	65, M.	Exposure to cold.	Gout.	Pleuritis, pericarditis, endocarditis, some 20 years ago, from exposure to rain and cold. Gout.	Many years; probably twenty.	Hypertrophy, calcareous deposit of aortic and mitral valves, great thickening of endocardium, softening.	Moderate increas impulse observed one or two occasio with great difficulty account of rhonch purple face.

Symptoms.	Complications,	Treatment.	Effects of Treatment.	Result.	Autopsy.
Palpitation, throbbing at apex of chest, hard, tense pulse, œdema, dyspnœa.	Formerly ascites, œdema of feet, throbbing of head.	Purgatives and diuretics, including jalap, colocynth, and blue pill, spirits of nitrous ether.	These evacuants gave relief, but debility increased.	Relief.	
Palpitation, great dyspnœa, P. regular, 80, great debility.	No org. dis. of kidney, but ur. at times nearly suppressed; extensive ascites, effus. in both sides of chest, cong. of bronch., liver greatly swollen.	Mercury to salivation before my treatment, but of no avail; magnes. sulph., squills, broom, and calomel, iodide of potass., compound jalap powder, tapping abdomen, ferri potassio tartras, spirits of nitrous ether.	Treatment of no avail till abdomen tapped; little fluid came away at once, but continued to ooze out for days; this gave great relief; the urine came away in increased quantity, and diuretics acted with more readiness; iron gave strength, but patient died soon after, under the care of another medical attendant.	Temporary relief; death.	An autopsy was made, but the only particulars obtained were "heart and liver greatly diseased."
Palpitation, irregular intermittent action, dyspnœa, dilated veins, irregular intermittent pulse, dropsy, hæmorrhage, etc.	Ascites, anas., occas. hæm. frm. bowels to 1 pt., consid. hæmop., tuberc. at apex of rt. lung, great oppres. of head, delir. coma, liver gtly. enlarged, flatus.	Tonics, diuretics, purgatives, mercury, bleeding.	Very slight benefit to dropsy, and tumultuous and regurgitant action of heart till within a day or two of gums becoming tender under mercury, which was long of being effected; on two occasions the urine passed copiously and carried off the dropsy in a few days; bleeding to extent of a few ounces gave great relief to agonizing oppression in head.	Relieved; death after some months.	Dying in the country, no examination made.
Flatus in stomach, palpitation, pain of oppression in region of heart, dyspnœa, anasarca, delirium, and coma.	Cong. of kidneys, urine slty. album. once or twice, great oppress. of head, delir., coma at last, flatus.	Saline purgatives and spirits of nitrous ether at first; slight bleeding for head; mercury and squills and scarifications for dropsy.	The first treatment so relieved the patient of flatus, that he believed himself cured; mercury and squills proved of little use, though continued to salivation; dropsy effectually carried off by scarifications of legs.	Relieved for a time; died in a few weeks.	None.
Palpitation, pain in region of heart, great dyspnœa, anxiety of mind, flatus, vomiting, pyrosis, cough, hæmoptysis, emaciation, amenorrhæa.	Frequent hæmoptysis, cong. of lungs, pyrosis, frequent vomiting, flatus.	Bismuth, effervescg. draughts and opium, for stomachic irritation; rest in bed for excitement of heart; counter-irritation; latterly vegetable tonics and chalybeates.	The stomachic irritation completely subdued; heart became quiescent; the præcordial tumour was decidedly reduced; and the general health immensely improved.	Great improvement.	
Great dyspnœa, loud persistent rhonchus, latterly moist, oppression in head, irritable temper, immense distension of stomach from flatus, anasarca of lower extremities, P. usually regular, of moderate strength.	Extens. anas. of lower extr., no albuminuria, hydrothor., emphys., œdema of lungs, congest., chronic bronch., oppres. of head, headache, slight hæmopt. 2 yrs. before, impatience; liver congest., stomach much distended by flatus.	Cupping of head and chest and bleeding for congestion; diuretics, purgatives, antispasmodics, stimulants.	The patient being full of blood, benefited greatly by the loss of some ounces; he was bled a month before death, and so great was the consequent mitigation of the dyspnœa and rhonchus, that the sounds of the heart, till then inaudible, became more distinct than they had been for years.	Death.	Heart moderately enlarged, flabby, and soft. Pericardium adherent nearly throughout; endocardium thickened throughout, quarter of an inch thick, and cartilaginous in left ventricle; aortic valves ossified; aorta ossified to considerable extent; emphysema of lungs, œdema of lungs; effusion in both pleuræ; congestion of lungs; enormous distention of the stomach from flatus; liver congested; kidneys congested; left presented a cyst, size of horse-bean, containing tuberculous matter.

No.	Name.	Age and Sex.	Habits of Life.	Family Disease.	Antecedent Disease.	Duration of Disease.	Form of Disease.	Physical Signs.
40	S.	60, F.	Comfortable.	None.	Rheumatism.	Some years.	Hypertrophy.	Impulse strong and more exten than natural, heavi
41	M.	40, F.	Exposure to cold.	None recorded.	None recorded.	Some years.	Hypertrophy to great extent.	Impulse greatly tended and increa in force.
42	G.	73, M.	Exposure in military service in tropics for many years. Drank freely.	None recorded.	None recorded. Had chronic irritation of bladder.	Forty years.	Great hypertrophy, with extraordinarily rapid action.	Impulse hard, kno ing, greatly extend succussion of the tire chest, percei through right sh der; sounds dull, o narily weak; no normal sounds.

CASE OF CREEPING BUBO, ILLUSTRATING THE EFFICACY OF MERCURIAL TREATMENT.

By SAMUEL SOLLY, Esq., F.R.S., Senior Assistant-Surgeon to St. Thomas's Hospital, etc.

In the London Journal of Medicine for May 1849, I published an essay on Creeping Bubo; and as the following case illustrates the utility of a mercurial course as therein recommended, I am anxious to lay it before the profession as an addition to my former communication.

Case. The patient, a Cambridge student, aged 23, of good general health, had been, before I saw him, under the care of Mr. Robert Brown of Brixton Hill, to whom I am indebted for the particulars of the case.

April 10, 1850. A chancre appeared within the urethra, close to the frænum, and was shortly afterwards followed by a swelling in the groin. Caustic was applied by a hospital surgeon, who also ordered blue pill and extract of conium three times a day. The chancre healed completely in about a week; the swelling in the groin suppurated, and was opened on the 16th April, but it did not heal.

June 1. He went to Ramsgate, and to Brighton, and took baths for a fortnight. At the end of June he again went to Brighton. On his return, the sore in the groin was found to extend under the skin for an inch and a half; this was laid open in its entire length on the 30th of June.

July 16. The patient consulted me. I expressed my opinion that

Symptoms.	Complications.	Treatment.	Effects of Treatment.	Result.	Autopsy.
Palpitation occasionally, action always great, sense of fluttering, pain darting from heart down left arm, moderate dyspnœa, debility, weak pulse, 88, regular, copious discharge of blood from lungs on two or three occasions.	Copious hæmoptysis once or twice, conges. of lungs, flatus.	Alteratives, hops, cinchona, stimulating embrocation to chest and arm.	Palpitation somewhat reduced, and strength moderately increased; pain not materially relieved.	Some improvement.	
Palpitation, constant over-action, hydrothorax, anasarca of lower extremities, dyspnœa, exhaustion, aphthæ of tongue.	Anas. of lower extrem., hydrothorax, cong. of lungs.	Hyoscyamus, spirits of nitrous ether, seton at præcordia.	Some relief from hyoscyamus and spirits of nitre; none from seton.	Some relief for a time; death after a few months.	No examination.
Constant over-action, with pulse about 80, frequent fits of extremely rapid action, with small scarcely perceptible pulse of from 140 to 200; the action of the heart resembled quivering, and the foot when the legs were crossed would move like the wheel of a watch; orthopnœa, œdema of feet and ankles latterly, chronic irritation of bladder, with alkaline mucous urine, exhaustion.	Œdema of feet and ankles some days before death, cong. of lungs, dry rhonchus.	Morphia to allay palpitation; spirits of nitrous ether, squills, and saline diuretics; brandy, chloric ether; animal diet.	Morphia proved of immense service, would reduce pulse from 200 to 80; chloric ether induced extremely violent paroxysm of palpitation.	Great relief for a few days; death.	No examination permitted.

CREEPING BUBO. BY S. SOLLY, ESQ.

the disease was true *creeping bubo;* and that I was afraid it would not heal except under a complete mercurial course. As this was inconvenient, it was decided to dress the sore with mercurial ointment, and to give Plummer's pill at night, and iodide of potassium with sarsaparilla twice a day. He continued this treatment till the 20th of October; the greater part of the time being spent in a fine healthy spot in the moors of Scotland, and the patient leading a steady regular life, and not taking much exercise. When he returned from Scotland on the 20th October, the sore had extended, the edges were hard and more elevated, and the ulceration creeping under the skin in a semicircular form, healing a little in some places, but extending a little in others. I now recommended a more decided mercurial course; but it was agreed that it should be postponed for six weeks, to enable the patient to get his degree at Cambridge. In the mean time, he was to take the bichloride of mercury with sarsaparilla.

November 27. He returned from Cambridge, with the sore in about the same state as six weeks ago. He was now confined to the house, and commenced rubbing in a drachm of the strong mercurial ointment every night. As soon as the mercury affected his gums, which took place in a few days, the sore began to amend, and continued to heal steadily. It was healed in five weeks after the rubbing in was commenced; and some thickening of the cicatrix was removed by a continuance in the use of the mercurial inunction for a week longer.

St. Helen's Place, Bishopsgate, March 1851.

OBSERVATIONS IN REPLY TO DR. GEORGE GREGORY ON EXANTHEMATIC RELATIONSHIP.

By ALEXANDER KNOX, M.D., Physician to the Dispensary, Strangford, County Down, Ireland.

My attention has been drawn to two papers written by Dr. George Gregory, Physician to the London Small-pox Hospital, which were inserted in the *Medical Times* (on the 18th of January and 1st of March in the present year), on what he terms Exanthematic Relationship; but principally devoted to the criticism of my views on the subject of Vaccination, which first appeared in the pages of this Journal in November and December last, and have subsequently been published in an independent form. I should gladly have avoided any controversy on this subject; but as Dr. Gregory has specifically appealed to me for an answer, I comply with his demand, limiting myself, however, to a dispassionate examination of such scientific points as seem to require notice, and avoiding all comment upon the tone and manner which he has adopted in canvassing my opinions. I must premise, however, that I do not subscribe to Dr. Gregory's mode of stating my arguments; but prefer to be the exponent of my own views. It will therefore be necessary for me to rectify some misconceptions—I will not term them misrepresentations—into which he appears to have fallen.

It is admitted by Dr. Gregory, that the experiments of Mr. Ceely were considered by many as decisive of the question of the identity of cow-pock and small-pox; and that this doctrine therefore has of late been very generally conceded. The state of professional opinion on the subject is here, I apprehend, correctly stated, and I shall therefore content myself with adducing in its confirmation a single extract from the letter of a physician of long standing and much experience, which is now lying before me: "I did not suppose that any one was of opinion that variola and vaccinia were not the *self-same disease*, the symptoms of course being modified in the latter", etc., etc. But however others may think on the subject, Dr. Gregory's ideas, according to his own testimony, have undergone no change, and he still maintains unreservedly that the diseases alluded to are not identical. It therefore becomes necessary to examine a little the train of reasoning, which he has adopted in support of his view of the subject.

The first of his arguments to which we shall advert is, "that no direct experiments, as far as his observation extended, had proved that cow-pock can be communicated from man back to the cow." This was published in 1838; yet the experiments of M. Fiard had distinctly shewn, that retro-vaccination could be effected in 1825, as it had been in the beginning of the century, when vaccination was first introduced into France; and the fact had also been established by Valentin, Sacco, Frank, and other competent authorities. At any rate, the experiments of Prinz and several recent observers have established the point beyond controversy. This argument, at all events, has, we presume, been abandoned by Dr. Gregory, as we find him actually

contending for the superiority of the virus[1] "renovated by passing the vaccine lymph again through the body of the cow".

The next statement of Dr. Gregory requiring comment is, "that the doctrine of identity, or non-identity, does not, and never did, influence the belief in the virtues of vaccination". And he elsewhere asserts, that identity is "the groundwork of my faith, the pivot on which my reasoning turns", and "the polar star of vaccine pathology". In replying to these assertions, it is necessary to shew, in the first place, that Dr. Gregory has not fairly stated the argument which he professes to answer; for he would make it appear, that the doctrine of identity constitutes my chief ground for belief in the protective influence of vaccination. But on reference to my papers,[2] it will distinctly appear, that my arguments are grouped as follows: 1. Popular experience, as to the immunity enjoyed by those who have casually contracted Cow-pock from the cow, horse, or camel[1]; 2. The identity of cow-pock and small-pox *an argument in favour* of the protective influence of vaccination; 3. Testimony in favour of the protective influence of vaccination; and, finally, evidence as to the actual results of vaccination, which I have in terms stated "*to be the most satisfactory, and after all, the only conclusive method of determining the true value of cow-pock.*"[3] And again, at page 24, it is distinctly stated, that the protective influence of cow-pock has been advocated on the following grounds: 1. The power which it confers of resisting the contagion of the casual disease; 2. Of resisting the effects of variolous inoculation; 3. Of resisting the effects of re-vaccination. This explanation will enable the reader to judge whether I have good reason for preferring to be the exponent of my own views. But although identity is not the "groundwork of my faith", I still continue, with great deference to Dr. Gregory, to look on it as a strong corroborative argument in favour of the protective influence of vaccination; and until he shall point out some disease which, by its passage through the system, prevents the subsequent attack of another disease, I shall venture to maintain, that the disproval of identity would fairly tend to shake our confidence in the defensive power of vaccination. But as far as the opinion goes, that the result of experience is the best proof of the protection afforded by cow-pock, there is no difference of opinion whatever between Dr. Gregory and myself. His whole argument is, therefore, merely an *ignoratio elenchi;* but if he assert that the proof of the doctrine in question may not be strengthened by corroborative arguments, there we unfortunately disagree.

But to pass on to another point of Dr. Gregory's criticism, regarding the pustular character of cow-pock, it is necessary to shew, in the first place, that, by quoting a part only of my statement, and placing another part in italics, a meaning is conveyed different from what I have really expressed in the original. The quotation to which I allude is this, "although cow-pock is considered rather a vesicular than a pustular malady, the vesicle becomes turbid towards the close, *and actually secretes genuine pus. Such is the usual progress of the genuine cow-pock.*" By this partial quotation and typographical device,

[1] Medical Times, March 1, 1851.

[2] London Journal of Medicine for 1850, p. 1044 et seq.; and Pamphlet, p. 10 et seq.

[3] Ibid., p. 1138; and Pamphlet, p. 20.

it is made to appear, that the last quoted clause refers exclusively to the progress of the vesicle; whereas a glance at the original in my pamphlet (page 14), will shew, that it has reference to the entire preceding description of the phenomena of cow-pock. As I should be very sorry to accuse Dr. Gregory of intentional misrepresentation, or of want of candour in stating the arguments of an opponent, I shall set down this misconception also simply as a mark of the haste with which he has evidently written. But still we are directly at issue, on the point as to the secretion of pus in cow-pock; for, although he qualifies his objection by stating, that he has not met with this as the *normal* character of cow-pock (he does not say that he has never met with it), yet he expressly affirms, that one of the essential differences between cow-pock and inoculated small-pox, is the invariable tendency to pustulation of the latter, and the truly vesicular character of the former. And he adds, "if I saw the genuine cow-pock secreting genuine pus, I should very soon become a convert to Dr. Knox's theory of identity; but, as I do not see the fact, I may be excused for demurring to the theory founded on it". Here I may be permitted to state, that the theory, whatever confirmation it may gain from the fact to which Dr. Gregory alludes, is not founded on it; it has other and much more substantial foundations—but let this pass. It cannot escape notice, however, that the other arguments adduced by Dr. Gregory against the doctrine of identity cannot have any great weight in his own mind, as he candidly enough admits, that if he were satisfied as to the correctness of my statement on the last mentioned point, he should soon adopt the theory which I have advocated. It appears of consequence, therefore, to examine for a little the question at issue, which is one of fact. The result of my own observation is explicitly stated in the quotation above alluded to, viz., that "although cow-pock is considered rather a vesicular than a pustular disease, the vesicle becomes turbid towards the close, and actually secretes genuine pus"; a description which, with equal correctness, might be applied to small-pox; for it first secretes lymph, and subsequently pus. No doubt there is usually a difference as to the quantity of the purulent matter, but this does not invalidate the truth of the general description. So far, therefore, from seeing an essential point of difference between the two forms of the malady, in the character of the secretions of the pock, I should refer to their similarity in this respect, as an additional proof of their identity, were additional proof wanted of a fact, demonstrated, as I conceive, by direct and conclusive experiments. As I do not, however, feel disposed to place my humble and unaided testimony in direct opposition to the high authority of Dr. Gregory, I shall here briefly refer to a few out of many distinguished writers, who concur with me as to the characteristic secretion of the cow-pock. Not to mention that Schlesier, Heim, and perhaps the majority of writers, employ the term pustule in speaking of the cow-pock, I find that Jenner, long since, was not singular in pointing out the close resemblance of the vaccine pustules, in certain stages, to the pustules of small-pox; for Soemmering, and C. L. Hoffmann, certainly no inaccurate observers, have made the same observation. A clever anonymous writer, in the *British and Foreign Medical Review* (No. xvii, p. 94), thus states the point in debate. "The lymph, though

at one time thought to retain its transparency uninjured, is said to become turbid and puriform after the full development of the pustule". Dr. Mason Good, likewise, in his description of the natural form of cow-pock, or as immediately received by milking, expressly asserts that the fluid, at first limpid, afterwards becomes opaque and purulent. And Dr. Elliotson, who it is presumed will be considered a competent authority, in speaking of vaccinia, says that, "although there are only vesicles at first, the contents become so turbid, that at last there is *genuine pus*". The testimony of Cazenave and Schedel is to the same effect; "le fluide contenu dans la vesicule devient purulent", etc. But it is unnecessary to accumulate further testimony on this head, as the question, after all, is one of fact, which the reader, as opportunity may occur, can determine for himself; and in which he would receive much assistance from the minute description of the morbid anatomy of small-pox, written by Petzholdt. Dr. Gregory has further expressed his utter inability to understand the passage in which I have stated, that in general the character of the malady has been rendered infinitely milder by its transmission through the cow. Now if he will compare the characteristic features of small-pox with the symptoms which follow the disease produced by the lymph derived from a cow, after inoculation with small-pox matter, I think he will not be at any loss to comprehend my meaning.

Again he questions, but hesitatingly, and with more caution, my reference to the occasional severity of the cow-pock occurring in the cow: not venturing absolutely to deny the severity of the epizootic which occurred at Moorshedabad, he contents himself with stating, that I ought to be aware how much doubt hangs about these cases. But experience might have taught Dr. Gregory, that to throw doubt or discredit on facts that come in the way of a favourite theory, although an easy, is not in the end a very successful mode of controversy. At one time Dr. Gregory maintained, as we have already pointed out, that no distinct experiments had proved that cow-pock could be communicated from man back to the cow. And he further asserted, that the experiments of Dr. Sonderland, and others instituted in Egypt, which shewed the practicability of transferring small-pox, from man to the cow, were "incorrect, if not altogether fabulous". Would Dr. Gregory make the same assertions now? We presume he would not; but, at all events, he can no longer repeat the assertion, that "the theory which would explain the preservative power of the cow-pock, on the principle of its being small-pox, which, in passing through the body of the cow, had become modified, is still unsupported by direct experiment." He may also probably have altered the opinion, "that the hope entertained by some sanguine physiologists, that, in the possible loss of the present stock of cow-pock, small-pox might be made to furnish its antidote, is altogether illusory." But that this hope is not illusory, has been proved by the experiments of Thiele, Ceely, Estlin, Badcock, and others; for many thousand persons have been successfully vaccinated with the lymph taken from cows inoculated with small-pox matter: indeed, the point has been conceded by Dr. Gregory himself, who states, that he would as soon use vaccine virus, generated in the cow by the inoculation of small-pox matter, as that which arises in the cow spontaneously. Mr. Badcock alone, whose

persevering energy in elucidating the point under discussion is worthy of all praise, has kept up, during the last ten years, a succession of experiments upon more than a hundred cows, and has thereby not only supplied lymph to many other practitioners, but has himself vaccinated more than eight thousand patients, without a single failure. He therefore, justly in my opinion, considers the identity of the two diseases to be fully proved by his experiments.

Having thus far attempted to dispose of various objections, the next point which I shall briefly notice, is the allegation with reference to the grouping of the phenomena of inoculated small-pox in the tabular form, in my pamphlet (pp. 19, 20),—that all, to use the language of Dr. Gregory, is inaccurate. In criticising this part of my treatise, he says that the papula, in inoculated small-pox, is as much confined to the locality of the puncture as in cow-pock. Perfectly true, no doubt; but on reference to the fifth page of my pamphlet, it will, I think distinctly appear, that I was already in possession of this information. It is scarcely to be expected that the phenomena of a disease can be as minutely described in a tabular form, as in a detailed description, and I admit that the table in question might be more lucidly arranged; but I shall content myself with a simple denial of the assertion, that in drawing it up, I was influenced, even in the slightest degree, "to assimilate the course of cow-pock to that of inoculated small-pox." The clause "generally few in number", which I have used in the table, refers to the secondary eruption; and I have yet to learn that this secondary eruption, although frequently more diffused, may not be occasionally confined to the vicinity of the punctures. And with regard to the criticism on the statement, that the areola appears on the *ninth or tenth day*, and that, by the tenth day, the primary pustule is full of matter; if mistaken in this respect, I can at least allege that I am not solitary in the error, as I can show by appealing from the opinion of Dr. Gregory, writing hastily and captiously, to Dr. Gregory, writing in a calm and philosophic spirit. For, referring to his own description, I find it to run as follows. "The incision, when viewed through a glass, now appears surrounded with an infinite number of small confluent papulæ, which daily increase in size; on the *tenth day* an areola, or circle of inflammation, forms around the inoculated point, *now* distended with matter. This areola is irregular in shape, and in its progress becomes interspersed with numerous minute vesicles. And again, occasionally on the *seventh*, but oftener on the *eighth day*, rigors occur, accompanied sometimes with faintishness, sometimes with pain of the back, headache or vomiting. The patient complains of a disagreeable taste in his mouth, and the breath is offensive, after which the eruption shews itself."[1] Neither am I solitary in the opinion, that, as a general rule, there is no "secondary fever"; in confirmation of which I only consider it necessary to quote a single authority, that of Dr. Watson, who expressly asserts that it is "*generally slight, or wanting.*"[2] But it will probably be thought that enough has been said on this point.

I pass on to the criticism on my assertion, that "the deterioration of the vaccine virus is a mere hypothesis." In opposition to this

[1] Cyclop. Pract. Med., vol. iii, p. 750. [2] Lectures, 3rd Ed., vol. ii, p. 789.

view, the authority of M. Bousquet is quoted, in reliance on which it is asserted, "that the experiments performed in Paris, in 1836, most distinctly *proved?* that the lymph was improved most materially in all its characters". Now I am fully aware of the experiments referred to; and without questioning the facts, it is open to me to question the validity of the inferences which have been deduced from them. But having told his readers so much, Dr. Gregory might also have apprised them, that the greatest diversity of opinion prevailed amongst the members of the faculty, who witnessed the results of the experiments alluded to. Some of the members of the Academy took the same view as Dr. Gregory, and drew the conclusion, that the original lymph had degenerated, whilst others inferred, as I do, that the size and elevation of the pustules is no infallible criterion of the energy of the virus, and that much variety, in this respect, may be produced by peculiarity of constitution, the state of the atmosphere, and other causes, without attributing it to deterioration of the lymph. At the same time I am quite aware, and have expressly stated, that vaccine lymph may be deteriorated by ignorance or carelessness; but I repeat the statement, in full confidence in its truth, that it is a mere hypothesis to assert that any deterioration has taken place in its qualities, simply by transmission from person to person. I do not question the fact, that many imperfect specimens of vaccine virus may be found; but, on the other hand, I have no doubt, from the testimony which might be adduced, that lymph may be found in the most genuine form, although in continuous use from the time of Jenner. My opinion may be deemed of little weight on this point, as contrasted with the high authority of Dr. Gregory; but the statement of such observers as Dr. Watson cannot be lightly passed over; and we find this distinguished physician thus expressing his views on the point under discussion. "For one year I had a seat as the Senior Censor of the College of Physicians, at the National Vaccine Board, and I then had opportunities of satisfying myself that lymph, which had been transmitted without interruption from person to person, ever since the time of Jenner, continued to generate as perfect a cow-pock vesicle as at first". To adopt the language, therefore, of a clever writer,[1] "It remains, we think, still to be proved, that where all Jenner's directions have been attended to, the vaccine lymph has undergone the smallest deterioration". Were we even to admit that it has become effete or deteriorated, we do not believe that the proposal brought forward at one time to remedy this effect, by increasing the number of punctures, is founded on any substantial grounds; on the contrary, we look on it as altogether illusory, and we think it would require strong evidence to shew that ten, twenty, or even forty punctures, with imperfect lymph, would have the same preservative effect as a single vesicle produced by genuine virus. Before dismissing this part of the subject, I may be permitted to allude to Professor Hering's statement. This eminent writer informs us, that a very great variety of opinion exists as to the value of lymph produced by retrovaccination. Some believe, with me, that there is no difference in efficiency between it and that hitherto in use; others,

[1] Brit. and For. Med. Rev., No. xii, p. 494.

as Prinz and Bousquet, have come to the conclusion that its quality is improved by retransmission; whilst a third party, of whom Professor Ritter is one, are of opinion that it is less active than virus of spontaneous origin. Under such circumstances it is not reasonable to expect that a dogma, emanating even from the highest authority, will pass unquestioned.

But it has been asked why, if the two diseases are identical, so many cases of small-pox occur after vaccination, and only an infinitesimal proportion after a primary attack of the casual disease? Were the fact really as stated, it would be a sufficient reply to contrast the immense preponderance of the vaccinated, in point of numbers, over those who have the disease in the casual form. It is therefore not sufficient to shew, that the absolute number of recurrent attacks is greater after vaccination than after casual small-pox; to give any force to the objection we are discussing, it should further be clearly shewn that the relative proportion also is in the same circumstances greater. In short, it seems to come to this, that cases of small-pox, after small-pox, are less numerous than after vaccination, simply because the primary cases of casual small-pox are also infinitely less numerous than cases of vaccination. There is also another source of fallacy in drawing a conclusion, which should be pointed out. Many of these alleged cases of small-pox occur after *imperfect* vaccination; and are therefore, in reality, primary, and not recurrent attacks of the disease.

After writing thus far, I have read in the *Medical Times* of the 8th, and the *Dublin Medical Press* of the 12th of March, some observations of Dr. Gregory on the subject at issue, which, if correctly reported, seem to demand a passing observation. They arose out of a report of some cases of recurrent small-pox read at the Royal Medical and Chirurgical Society, on the 25th Feb. last, by Dr. Webster and Dr. A. P. Stewart. In one instance, although vaccination and revaccination had been practised, and, in others, though the patients had previously had small-pox in its natural form, yet the disease recurred a second, and in one instance a third time, and proved fatal. The cases alluded to are very interesting, and, in my opinion, strongly corroborative of the views expressed in my pamphlet (p. 38), that the constitutions of certain individuals are "absolutely beyond the influence of any protecting agent whatever".

Many of the failures of cow-pock are thus readily susceptible of explanation; for, in these instances, although vaccination did not protect the patient, a previous attack of the casual disease was equally unsuccessful in preventing its recurrence; and in one instance, as already stated, even a second time. In the course of the debate that took place, it appears to me, that the reference of Dr. Mayo to the epidemic of small-pox in Edinburgh, in which the disease was *remarkably more fatal among the inoculated* than the vaccinated, constituted a very satisfactory reply to the dogma of Dr. Gregory; "that inoculation imparts full protection, whilst vaccination does not protect, except up to the age of puberty." Possibly, however, his opinion may not have been correctly reported; but if it has, on this point at least, "his ideas have not remained unaltered"; for elsewhere he has stated, that "permanent security is the *law* of the animal economy, and *temporary*

security the exception".[1] And I think it will be found on investigation, that Dr. Gregory's allegation, that modified small-pox occurs only in grown up persons, is equally irreconcileable with the facts of the case. Wendt, and several other writers, mention instances where the disease took place before puberty; and Dr. Snow's experience is to the same effect. Dr. Thomson found the modified disease to occur at every period after vaccination. In my own practice I have met with at least two unequivocal cases; the patients being in the ninth or tenth years of their age. Of two practitioners, of extensive experience and sound judgment, whom I have consulted on this very point, one writes, that "he does not remember to have met with a dozen cases of that disease (modified small-pox) under the age of puberty; and the other informs me, that, "with one exception, all the cases of modified small-pox, occurring after vaccination, which he had met with, took place before the age of puberty, the entire number not exceeding twenty". I could produce much more evidence on this point, if more were required, to shew that the *ipse dixit* of Dr. Gregory is absolutely erroneous.

Some of the statistical information, brought forward in the course of the debate alluded to, satisfactorily confirms the great value of vaccination; and the results afforded by the epidemic, referred to by Dr. Mayo, would even go to prove that vaccination, as a measure of protection, is superior to inoculation. But without going this length, if it be only equally defensive, its superiority, on other grounds, cannot be questioned; and, as I have elsewhere stated, "it is not reasonably to be expected, that cow-pock, formerly believed, and more recently proved, to be in itself only a modified form of small-pox, should impart any greater amount of protection than the more severe form of the malady" (Pamphlet, p. 38); an opinion which, I am gratified to find, has the support of so distinguished a physician as M. Chomel.

But there is another point on which it would appear that the ideas of Dr. Gregory have not remained unchanged. At the debate in question, he is reported to have said that "he regarded re-vaccination as nothing more than a means of satisfying the patient; it had no real preventive influence". This appears to be the opinion of Dr. Gregory in 1851. But that it was not so some years ago, will clearly appear from the following quotation: "The practice is one from which no harm and much benefit may be expected. If no effect follow, the security of the patient is rendered doubly sure. If vesicles arise, and the disease goes through all, or some part of its usual course, that security may be reasonably considered as renewed." As I have, in the essay which is the object of Dr. Gregory's criticism, fully explained my own views as to the value of revaccination, it is not necessary to restate them here. It would, however, be satisfactory to learn on what sufficient body of statistical information Dr. Gregory has so completely changed his opinion; and the production of the necessary evidence might moreover tend to restore confidence in his authority on such questions, which must necessarily be shaken by discrepancies of opinion so glaring as those alluded to.

I have already referred to Dr. Gregory's scepticism regarding the nature of the disease prevalent amongst horned cattle at Moorshedabad

[1] Cyc. Prac. Med., vol. iv, p. 414.

in 1825. In that scepticism I do not concur; but supposing it to be well grounded, there is no lack of other evidence, probably sufficient to satisfy every unprejudiced enquirer of the occasional severity of the disease amongst animals of that class. In the variolous epizootic occurring in Bengal, which is referred to in the appendix to the second volume of Baron's *Life of Jenner*, it appears that extensive inoculations from the diseased cows produced not the mild vaccine vesicle, but an *eruptive malady of the true variolous character*. Still later, Mr. Wood, in Corbyn's *India Journal* (March 1838), details several cases, in which lymph taken from the cow produced a disease of an eruptive character, so severe, that he even goes the length of saying, that variolous inoculation at such a time produces a safer disease than vaccination.[1] Various other severe epizootics, occurring at different eras, are on record, as the pestilential eruptive disease described by Dr. Layard in the *Philosophical Transactions* (1780), which ran its course in Holland and Flanders; that which prevailed in Picardy, recorded by Vicq d'Azyr; to which we may add the cases occurring in 1825, narrated by Dr. Baron, on the report of Mr. Tiley, in the first volume of the work already mentioned.

Before the publication of the experiments of Ceely and some others, many writers, though strongly convinced of the identity of small-pox and cow-pock, candidly admitted that a link was wanting to render the chain of evidence complete; and even Dr. Gregory, then writing more cautiously than now, was evidently fully aware of the nature of the conclusion to which such experiments, if successful, were plainly calculated to lead. Having endeavoured to throw discredit on the researches of Sonderland and others, we find that, on the very ground of their alleged want of success, he drew the inference, which will be best stated in his own words: "It remains *therefore* a very *questionable* point, whether these disorders can be essentially the same." And now when the experiments of Thiele, Badcock, Estlin, and Ceely, have rendered it impossible to deny, or even to question, the practicability of transferring the small-pox to the cow, Dr. Gregory's ideas, whilst all others around him have been convinced, still remain unchanged. And what his ideas on this particular point were, he has left no room to doubt, for he has stated in terms, that "*cow-pock and small-pox were as essentially different as small-pox and measles*". Admitting now, as I believe Dr. Gregory does, the facts so clearly elucidated by Ceely and others, he still denies that they warrant the conclusion generally drawn, viz., that cow-pock *implies the same thing*, or is *identical with small-pox;* and it therefore becomes necessary to inquire in what manner he attempts to explain the experiments alluded to, since the actual results have been established beyond the reach of cavil. This explanation I shall give in his own words. "I affirm that one malady is capable of producing or developing, by inoculation, in an animal of a different kind, another malady of an *allied* nature, but still specifically distinct." But affirmations, unsupported by facts, go for little in the present day. To give any weight to his theory, Dr. Gregory should have specified some diseases which, being transferred from one

[1] See Dr. Baron's Letter in Brit. and For. Med. Rev., No. xiii, pp. 295-6-7.

animal to another, produce other diseases specifically distinct in their nature. For our part, we profess our total ignorance of any such diseases. It is sufficiently established by the writings of Elliotson and Rayer, that the virus of glanders will communicate a disease from the horse to man, but it has never hitherto been maintained, as far as my information extends, that the disease thus transmitted is not glanders, but one, to adopt the definition of Dr. Gregory, of an allied nature, but specifically distinct. Hydrophobia is another disease transferable from the dog and other animals to man; but the latter, when thus infected, has been always hitherto at least believed to labour under veritable hydrophobia, and not under a specifically distinct disease. But Dr. Gregory attempts to support his theory by reference to the variola ovina, the sheep-pox of these countries, and the "clavellée" of our continental neighbours. Now even assuming all the facts on which his reasoning, as regards sheep-pox, is based, to be true, there is little if any weight as affecting the identity of the diseases; and that little has been sufficiently disposed of in a letter, signed "Inquisitor", in the *Medical Times* of the 15th of February last. But several of the assertions relied on require further investigation before they can be admitted into the class of facts. When Dr. Gregory has supplied the necessary evidence on these points, it will be soon enough to reason on them; for the present, therefore, I shall content myself with enumerating a few of the assertions to which I have alluded as requiring confirmation.

1. That "these disorders of the horse and cow, respectively, are *always* mild or benignant disorders". 2. That the "sheep-pox is the offspring of an allied miasm". 3. "Matter taken from a sheep affected by this disease, and applied to man, appears as cow-pock; but vaccine lymph, taken from the cow, has no effect on the sheep, nor has the sheep-pox the property of affecting the horse or cow." 4. "It does not appear that human vaccine will affect either the horse or sheep." 5. We have "the acrid miasm of the sheep producing a mild disease in man". This last assertion has, no doubt, the support of Sacco; but Ceely, Marson, Simmonds, and Hurtrel d'Arboval, have been led by experiment to a directly contrary conclusion; viz., that ovination will not communicate the disease to man, either in a *mild* or acrid form, as appropriately pointed out by "Inquisitor", the writer already referred to; who has also saved me the trouble of examining, at length, the vague and irrelevant chemical analogies by which Dr. Gregory labours to give support to his theory. But, before leaving this part of the subject, I shall just refer to one passage in Dr. Gregory's first communication, as a specimen of his manner of elucidating his theory.

"It requires no great stretch of imagination to conceive, that the primary exanthematic miasm, so largely disseminated throughout the animal kingdom, is composed of two or three ingredients, which variously combined, appear in the several forms of small-pox, cow-pox, chicken-pox, sheep-pox, and equine grease; while the elementary changes convert the miasm into the parent of measles, scarlatina, the pestis bovina, and the canine distemper. Nay, it is further very conceivable, that cholera, the dreaded Asiatic pestilence, is an offshoot of the same miasmatic root, which, mollified by the lapse of

ages, may at length display features which will give it rank amongst the exanthemata."

It will scarcely be expected that I should offer any observations on such conceptions of the imagination as these, and they may very safely be left to the disposal of the professional world. Indeed, fancies so wild seem better adapted to an age when it was a serious subject of debate, whether one of the French kings should be bled on the right side or the left, than to the present enlightened era.

But further on, Dr. Gregory describes the small-pox and cow-pock virus as being also generically allied, but specifically distinct; and he winds up his theory by a quotation from M. Bosanquet, with reference to the identity of the diseases: "Il n'y a pas entre elles identité de nature, mais il y a reciprocité d'action." And this is Dr. Gregory's mode of explaining the lucid, beautiful, and conclusive experiments of Ceely. Calculated, as they seem to be, to demonstrate to every impartial mind that cow-pock and small-pox are essentially the same disease, to Dr. Gregory they only prove, that they are not identical, that they are generically allied, but specifically distinct, not possessing identity of nature, but reciprocity of action!

Dr. Gregory has further attempted to show that the non-identity of the diseases in question may be proved by a strictly logical inference, and his syllogism is thus expressed: "Identity means sameness; if they are the same diseases, they cannot have differences; but cow-pock and small-pox have differences, and therefore they cannot be identical." But this mode of arguing would manifestly prove a great deal too much. For instance, mild and malignant cases of scarlatina have very obvious differences, and therefore accordingly they cannot be identical. But to take an example still more to the point. Casual and inoculated small-pox have unquestionably differences, and if we were to adopt Dr. Gregory's syllogistic argument, they cannot be identical; and yet in both these instances, I feel satisfied that Dr. Gregory will assent to the identity of the maladies referred to. This style of argument is certainly puerile enough; but as I should be sorry to accuse Dr. Gregory of quibbling, it is manifest that if he is in earnest here, he overlooks a fallacy, which even the merest sciolist may detect.

Having thus passed briefly in review the comments of Dr. Gregory, I do not think it necessary to restate here the arguments on which I have urged the identity of small-pox and cow-pock. I shall therefore content myself with repeating in very few words, the sum of my belief on this head. When small-pox virus, taken from the human subject, produces by inoculation a specific disease in the cow, I maintain that the disease thus produced is small-pox; and when this disease is retransmitted by vaccination to the human subject, I believe that the resulting malady is, *ex necessitate*, small-pox also. These inferences, it appears to me, are strictly deducible from the experiments of Badcock, Thiele, and Ceely, and it must be left to the professional reader to contrast them with the theoretical explanation of Dr. Gregory, "that one malady is capable of producing by inoculation, in an animal of a different kind, another malady of an allied nature specifically distinct, not possessing identity of nature, but reciprocity of action". I of course admit, and have distinctly pointed out, the modifications to which the disease is liable;

but I do not admit that these are of such a character as to afford any valid argument against the identity of small-pox and cow-pock. I fully concede that various circumstances may modify the phenomena resulting from the transmission of the small-pox virus; but *I do not admit that any circumstances can destroy its identity, or confer on it the power of producing any other disease than small-pox.* I therefore feel constrained altogether to refuse my assent to the affirmation of Dr. Gregory, that one malady is capable of producing in an animal of a different kind, another malady specifically distinct. On the contrary, after deliberate reconsideration of the whole subject, I think the facts warrant me in supporting the views expressed in the petition to Parliament, emanating from the Provincial Medical Association, viz., that the cow-pock is "an affection of a true variolous character, demonstrated by historical evidence, as well as by direct experiment, human small-pox having been recently communicated to the cow by inoculation, and the result having been the production of a variolo-vaccine lymph, possessing all the properties of the original vaccine disease."

In conclusion I have only to state, that the discussion, in which I have been reluctantly engaged, was forced upon me. Although necessarily commenting freely on the views of Dr. Gregory, where I believed them to be erroneous, I have passed by many points, in his hasty effusions, which appear open to objection. My sole motive, in writing on the subject, has been to advocate, at an appropriate time, views which I consider to be true, and which I believe deeply to affect the social welfare. And although I have the misfortune to differ with Dr. Gregory, whose authority generally I respect, and have shewn no wish to underrate, yet many letters, now lying before me, encourage me in the belief that I have neither erred in the views which I have adopted, nor in the time selected for their advocacy.

Strangford, Ireland, March 1851.

BIBLIOGRAPHICAL RECORD.

General Pathology, as conducive to the establishment of Rational Principles for the Diagnosis and Treatment of Disease; a Course of Lectures, delivered at St. Thomas's Hospital, during the Summer Session of 1850. By John Simon, F.R.S., etc. pp. 288. London: 1850.

Our readers are doubtless in some measure already acquainted with the contents of these Lectures, seeing that they first appeared in the pages of the *Lancet*. We are, however, tempted, in spite of this, to bring them again somewhat prominently forward; and in so doing, we bear the strongest possible testimony to our sense of their value and importance.

The First Lecture is of an introductory character. In it Mr. Simon labours strenuously with the difficulties of definitions. We shall not follow him in his struggles. What he says, he says well, and very much to the purpose; but agreeing with him, as we do, that a matter admits of philosophical definition only when its investigation has been completed, which is very far indeed from being the case with the science of pathology, we hold ourselves fairly exonerated from the trouble of striving after the unattainable.

The Second and Third Lectures are devoted to the examination of the Condition of the Blood in Disease; a subject, the importance of which it is scarcely possible to over-estimate. Moreover, it is a most intricate branch of the inquiry, for, as Mr. Simon most correctly observes: "A chief difficulty in the study is this; that the blood undergoes changes of its own—undergoes what I can hardly call anything else than a process of growth. In addition to receiving new matter from the food, and old matter from the tissues,—in addition to feeding the several organs, and supplying the several excretions of the body, it does also itself undergo, as I have said, progressive changes of its own, analogous to the growth of the solid tissues. For the new materials which are derived to it from the food are not *blood* at the time of their addition; they are crude, immature products, which subsequently ripen within the stream of the circulation, under the influence of the maturer blood, and conformable to its composition. To some of you, perhaps, the view here suggested, of the blood undergoing development akin to growth, may be new and strange. There is an early prejudice, which makes us consider solidity of structure an indispensable preliminary for the residence and manifestation of life. Still, in spite of that prejudice, and in spite of the fluidity of the blood, you may safely believe that that red fluid is a living, growing mass; that the process of blood-formation is not the mere infusion of certain ready-made materials from without, but is as truly a process of growth as the development of cartilage or muscle.

"If the power of resisting change—if the power of converting things to its own type, and perpetuating its own constitution—be signs of life in an element or portion of the body, I know none which possesses these qualities in a higher, if in so high a degree as the blood. And further, in recalling its anatomy, you will be confirmed in this view. You will remember, that in all other elements of the body, the abundance of cell-development which you meet with, measures the activity and constancy of growth; and if you put a drop of blood under the microscope, and compare it with a patch of equal size of liver, or of brain, you are at once enabled to judge how immeasurably greater is the developmental activity in the blood; or if you look at a drop of fluid from the thoracic duct, you observe myriads of cell-germs there—germs which it is the chief, and perhaps the only, object of the lacteal and lymphatic systems to provide, and which attain their maturity, and fulfil their purpose, only when received into the blood. And not only does the blood live and grow; but, in the mature animal, its life and growth must

precede all other life and growth in the body ; for first *it* grows, next other organs grow at its expense." (pp. 21, 22.)

Besides this, the rapidity with which changes in the blood occur, and the complex nature of the fluid itself (containing as it always does imperfectly formed particles, particles fully developed, and particles worn out by use), add greatly to the difficulties which beset our path.

In following out the subject of blood-diseases, our author examines, *first*, those which depend on morbid ingestion ; *secondly*, diseases depending on increase, arrest, or alterations of the excretions ; *thirdly*, diseases depending on modification of the blood's own growth and development.

The *first* are illustrated by the action of *poisons*. The *second* are exemplified by the *retention* and *accumulation* in the blood of matters which ought to be excreted, as carbonic acid, bile, urea ; and by the alterations produced by certain new, artificial, or otherwise abnormal excretions, such as the *inspissation* which results from the excessive discharges of cholera, and the *attenuation* following upon hæmorrhages, protracted suppurations, etc. The *third*, which may be considered as primary diseases of the blood, are examined at considerable length. The *corpuscles* may be proportionately increased, which is the condition in plethora ; or diminished, as in chlorosis. The *serum* may be altered in regard to the respective quantities of salts and albuminous elements, and probably the changes here are the most important of all, though our knowledge of them is not as yet very precise. Among the most common, and at the same time most interesting of these, are the variations in the quantity of *fibrin*. Mr. Simon inclines to the view adopted by Zimmermann and a few other physiologists, that the fibrin, instead of being the nutritive element in the blood, rather occupies the same position as the extractive matters, and, like them, is the result of decay of the blood itself, or of the waste of the tissues. We conceive that this view is quite untenable. If it were true, how are we to explain the well known fact, that the quantity of fibrin is greatest in the chyle of the thoracic duct, having appeared gradually during its progress from the lacteals ?

Be this as it may, many evils result from the presence of an excess of fibrin in the blood. Among these, Mr. Simon mentions the existence of fibrinous concretions in the spleen, the kidneys, and the liver ; and he attributes to the same cause the occurrence of vegetations on the cardiac valves, which are so frequently found in cases of acute rheumatism, and are generally attributed to endocarditis.

" As the question ' How do these valve-diseases originate ?' is one of the greatest practical importance (for it must materially influence the method of treatment), I shall enter at length upon the theory of their formation.

" The general opinion, which till very lately has been unquestioned, is, that the lining membrane inflames, and pours out lymph (just as the pleura or pericardium might do), and that thus these vegetations are true *excrescences*, which have arisen in an inflammatory exudation.

" Now here, on the threshold of the subject, a doubt occurs—Is the lining membrane of the arterial system susceptible of inflammation ? ' Inflammation,' in the language of the schools, ' consists in an increased action of the blood-vessels of a part.' Without pledging ourselves for the accuracy of this definition, we may use it in the present instance as a rough criterion of inflammation ; at least negatively. No part can be said to inflame, in the ordinary sense of the word, which has not vessels of its own. You cannot talk of inflammation of the hair or nails. What, then, are the bloodvessels of the lining membrane of the arterial system, which this theory supposes to be the seat of an increased action ? That portion of an artery which we term its inner coat has no bloodvessels of its own, nor do those of the middle or contractile coat (which are derived from the so-called *vasa vasorum*) penetrate to a sufficient depth to influence materially (if at all) the nutrition of the lining membrane.

"In the Museum of the College of Surgeons there is a preparation of Mr. Quekett's (an injection done, as all Mr. Quekett's are, with admirable success), which shows how very much the *vasa vasorum* fall short of reaching the lining membrane of the artery. And—if you will but think for a moment, what should *vasa vasorum* do there? what could they convey more fit for the nutrition and growth of the membrane than what is already there?—than that blood, namely, which is already washing over it incessantly and profusely.

"And again, gentlemen, reflect on this: the lining membrane of the artery and of the valves has an epithelium; wherever epithelium grows, the old cells drop off in a direction opposite to that whence the new ones derive their materials of growth. Just as our scales of epidermis drop from the surface of our bodies, being nourished and renewed from within; just so, if the epithelium of an artery were renewed from without (i. e. by *vasa vasorum*), the old scales, as fast as they became detached, would drop into the interior of the vessel; and though, no doubt, their decay is very slight, and the number that might thus pass into the circulation, and presently obstruct the capillaries, would be very small, still it would be essentially a clumsy arrangement.

"From a variety of reasons, it seems almost certain that the ordinary nutrition of the lining membrane of the circulating system is derived directly from the blood with which it has contact; and that its morbid changes depend—not on any inflammatory condition due to the *vasa vasorum*, but on those humoral changes, those variations in the qualities of the blood, by which it is more immediately and more certainly affected than any tissue of the body.

"On these grounds there would be great *primâ facie* difficulty in believing that the endocardial deposits could be of inflammatory origin. But this is not all; for, if they were inflammatory exudations, why should they be so peculiarly limited to projecting or uneven surfaces of the lining membrane? And why should they evince so decided a preference for the *left* side of the heart? Both sides of the heart, and all points of each cavity, are (one would think) equally exposed to the causes of inflammation; the coronary arteries supply both ventricles of the heart indifferently, and we well know that acute *peri*-carditis pays no respect to the grooves and septum of the heart; it traverses all such lines of demarcation, injects the bloodvessels of right and left side alike, and covers ventricles and auricles equally with its dense inflammatory exudation. On the supposition that these vegetations are inflammatory effusions from the membrane, I should be quite unable to explain why they should almost entirely confine themselves, as they do, to the valvular apparatus; and why their predilection for the left side should be so great, that the right is very rarely affected—perhaps never, except where the left has first suffered, and where the disease has been of such extreme intensity, that even its weaker affinity for the right side has been able to manifest itself.

"The opposite doctrine is the more tenable one. I believe that the origin of these vegetations is directly humoral; that they arise as fibrinous precipitations from an overcharged solution; the valves encrusting themselves with fibrin, just as a stick in certain streams coats itself with a calcareous envelope; and that the preference shown for the left side of the heart admits of explanation by reference to the peculiarities of its contents—the new-made arterial blood.

"You will observe that this theory involves the supposition, that arterial blood is more prone than venous blood to precipitate its fibrin, either as containing more of it, or as containing it in some more separable form.

"Not wishing to leave this a matter of uncertainty, I have experimented on the subject. I have carried a single thread, by means of a very fine needle, transversely through the artery and vein of a dog, leaving it there so

that it might cut the stream ; and I have done this repeatedly, sometimes in the femoral vessels, sometimes with the carotid and jugular, sometimes with the aorta and cava. I have suffered the thread to remain during a period of from twelve to twenty-four hours. My experiments have given me as a uniform result, that the arterial blood with the utmost readiness deposits its fibrin on the thread ; the venous blood with the utmost reluctancy. And in most of my experiments, the thread, where it traversed the canal of the artery, presented a very considerable vegetation on its surface (exactly like those we are talking of on the valves of the heart) ; a vegetation sometimes as large as a grain of wheat ; always of a pyramidal shape, with its apex down-stream, and its base attached to the thread. In the artery, one might say that the thread whipped the blood, just as one whips blood in a basin to get the fibrin out of it ; but with this trifling difference, that, instead of the rod beating the fluid, the fluid ran over the rod and precipitated its fibrin there. In the vein, the thread seemed to operate no way but obstructively ; never coating itself with fibrin, but sometimes delaying or stopping the circulation with a voluminous black clot, chiefly collected on that side of the thread remotest from the heart. Accordingly, the general statement and rationale of the matter appears to be as follows :—the disease in which these deposits are so frequent is one of intense over-fibrination of the blood, and one in which almost certainly there are other conditions, besides *quantity*, making the fibrin easy of precipitation ; the left side of the heart has preference, because it is the arterial side, and because arterial blood, as we have seen, readily parts with its fibrin ; the valves, and particularly their stream-ward surfaces, are chosen for the deposit, because their position exposes them chiefly to the friction of the current ; so that the whole curious selection of site for the deposit resolves itself into the concurrence of two conditions, which are fulfilled in that one spot of the vascular system—namely, the greatest chemical tendency to the deposition of fibrin, with the greatest mechanical facilities for its entanglement.

" In introducing this subject, I mentioned that it is one of great practical importance. Many people bleed locally, or even generally, when they hear an endocardial murmur arising in the course of rheumatic fever. In their eyes, the new disease is endocarditis ; and everything ending in *-itis* is thought, in at least a majority of instances, to be benefited by bleeding. Therefore, gentlemen, do not be in a hurry to call it endocarditis ; and, as for bleeding, all that I would venture to say (for of course the treatment of this physician's disease does not fall within my province) is, to assure you of the pathological fact, that you may bleed a patient to death without altering (except probably to increase) the proportion of fibrin in his blood.

" I may mention, however, as of some pathological interest, that in a recent work on Diseases of the Joints, by a French surgeon of considerable experience (M. Bonnet of Lyons), a section is devoted to the treatment of acute rheumatism by nitrate of potass in large doses (up to an ounce or an ounce and a half per diem). He speaks of its utility in the highest terms, and he quotes with full concurrence a passage from M. Gendrin, who has likewise used the medicine very extensively, to the remarkable effect that this method of treatment possesses this among other advantages, that it prevents inflammation of the endocardium,—*il prévient les endocardites.* You will find an interesting paper, on the same method of treatment, communicated by Dr. Basham to the Medico-Chirurgical Society, and published in the last volume of their *Transactions.*

" Now we know that nitrate of potash is a powerful solvent of fibrin ; we know that in these large doses a quantity of it must be retained in the blood, and we are thus enabled to interpret the efficiency of the remedy in accordance with our knowledge of the disease. Nitre, if present in the blood in sufficient quantities, would prevent fibrinous concretions on the valves, by increasing the solubility of this material, and diminishing its liability to precipitation." (pp. 54-58.)

The subject discussed in the Fourth and Fifth Lectures is DERANGEMENTS IN THE QUANTITATIVE DISTRIBUTION OF THE BLOOD. *Hyperæmia* may be either passive or active. Passive hyperæmia results from mechanical causes impeding the return of blood from a part. The vessels are too full of blood, but of blood which has been already fully used, and is therefore not in a fit condition to minister to nutrition; accordingly there is no over-growth consequent upon the repletion. But effusion very constantly results, and often gives rise to serious mischief. The fluid thus poured out is the *liquor sanguinis*, generally more or less deprived of its nutritive ingredients, the fibrin and albumen.

Active Hyperæmia is a very different process. It is not produced by mechanical impediments to the return of blood, but by causes which attract that fluid in undue quantities to any particular part. Mr. Simon regards molecular changes in the tissues as the primary step, and brings forward strong reasons for demurring to the opinion that an impression on the sentient nerves must precede the changes. Among other reasons, he adduces the following case, which we quote as being remarkably conclusive.

"A patient had complete anæsthesia of the fifth nerve, dependent (as a *post-mortem* examination subsequently showed) on its organic disease; the conjunctiva, as well as the integument of the face, was utterly insensible; not only was the function of the nerve destroyed, but those reflected nutritive changes of which I have already spoken had taken place, and had exhausted themselves; showing that the nerve was spoilt for participation in the acts of nutrition (whatever they may be), no less than for its more obvious uses as a medium of conscious sensation: the cornea had undergone ulceration, and had healed again. The following experiment was carefully made. The lids being held open, a single granule of cayenne pepper was laid upon the insensible conjunctiva; in a few moments it had become the centre of a very distinct circle of increased vascularity, the redness of which slowly became more and more distinct as long as the stimulus was suffered to remain; so that, on its removal, there was a very evident circumscribed erythema on the surface of the membrane. I consider myself justified in believing that this change occurred without any intermediate nervous excitement; not only because the history of the case would lead me to consider the fifth nerve as annihilated; not only because the experiment was totally unattended with sensation, but likewise because there was the very remarkable absence of that sympathetic phenomenon, which the faintest remnant of nervous excitability would have produced—namely, there was not the slightest trace of lacrymation." (p. 76.)

But these molecular changes probably, in most instances, produce an impression on the nervous centres, from which, by a reflex action on the middle muscular coat of the arteries, relaxation of the vessels results, and thus an increased quantity of blood is conveyed to the part. If this increased supply can be all used by the tissues in their healthy workings, hypertrophy of the organ is produced. If the supply be greater than what can be thus employed, new products are evolved—cells or fibres, foreign to the healthy structure of the part. In this we have the distinction between hypertrophy and inflammation; their general pathology has much in common; their causes are often alike—their modes of production identical. But in hypertrophy, however large may be the supply of blood, it all goes to the true nourishment of the organ, goes to increase the number of its natural molecules; while, in inflammation, all that is redundant goes to the formation of new products.

Atrophy is the converse of this. There is less blood than natural in the part; and this diminished supply may either be caused by mechanical impediments to the current, or result from the want of attraction of the tissues themselves, as is seen in organs long unused. Both these conditions, hypertrophy and atrophy, are illustrated by numerous examples.

The Sixth Lecture is occupied with the PRODUCTS OF INFLAMMATION. It is full of interest, and will well repay perusal, but is scarcely susceptible of analysis within moderate limits. In speaking of fibrinous effusions, Mr. Simon again dwells upon his peculiar views of the nature of that substance, and expresses his doubts of its tendency to become organised, believing that the instances generally adduced in proof are merely examples of the organisation of albumen, the true nutritive blastema which had been entangled in the meshes of coagulated fibrin. He regards suppuration as the natural end of inflammation, and considers that it is only to be avoided by arresting the progress of the inflammatory action, and thus preventing the completion of the natural steps. He believes that the new vessels which are found in inflammatory effusions, when they become fully organised, are prolongations of the vessels of the old tissues, not real new formations.

The Seventh and Eighth Lectures treat of TUMOURS. Mr. Simon first gives a general, and very graphic description of them, under the several heads of tegumentary, vascular, fatty, fibrous, cartilaginous, bony, cystic, and cancerous. He then, in a very interesting recapitulation, distributes them into four groups. 1. *Tumours by accumulated secretion*, such as encysted tumours of the scalp, simple ovarian cysts, bronchocele, etc. 2. *Hypertrophic tumours*, including the tegumentary and fatty, which are illustrations of partial hypertrophy, and the bony, as nodes and exostosis, which result from what he denominates adjunctive hypertrophy. 3. *Hypertrophic tumours with conversion of tissue*, as cartilaginous tumours connected with bones, or fibrous tumours of bones or cartilages. 4. *Eliminative tumours*, which include all the varieties of cancer. As the author's view of the nature of cancer is by no means common, we quote his reasons from the original.

"Finally, gentlemen, the difficult task remains to me of setting before you the pathological affinities and contrasts of *Cancer*. Let me remind you that I use the word generically; including under it the three species of which I have spoken, and taking the encephaloid form as its most perfect and characteristic illustration.

"Fix your attention, first of all, on the total unlikeness of cancer to any kind of tumour we have hitherto considered: observe how impossible it is to regard cancerous growths as accumulated secretion of any organ in which they arise, or as the results of its hypertrophy, either interstitial or adjunctive. They are distinctly new products—new developments of the organism; and they correspond to some new purpose. The evolution of a cancerous tumour in the body marks, I apprehend, a new state of things in respect of the patient's total organisation and vitality; just as much as the first acting of the kidneys in the embryo, and of the lungs in the infant, respectively mark new eras in the animal's progressive development.

"Thrust aside all the accidents and trivialities of the subject; strip the question naked; and what does a cancer mean? Substantially it is a new excretory organ. Under the pressure of some mysterious constitutional necessity, a growth arises, which (in its typical form) tends essentially to acts of eliminative secretion; just as distinctly as the healthy liver or the healthy kidney. You must not stop short at the *tumour*: you must scan the whole drama of the disease, in which the tumour forms but a pro-œmium. Look again at such a case as I gave you for illustration—a case of encephaloid manifested in the globe of the eye: that vast fungating ulcer which ensues on the protrusion of the tumour, and which continues hourly to purge forth its profuse discharge,—that is the real intention and purpose of the tumour, as palpably as urine expresses the intention of the kidney, or bile the intention of the liver. The cells of the tumour have grown like healthy gland-cells—like the nucleated cells of a mucous membrane, only to discharge themselves with their contents. There is nothing, I repeat, like hypertrophy in the disease: it consists essentially in the establishment of a new vent—a new organ of elimination; and that organ develops itself according to the

type of other secreting organs; it develops itself as an apparatus for the formation of deciduous cells.

"How constitutional—how intensely constitutional—is this eliminative action, can hardly be misunderstood. The mere fact that Nature thus (if I may say so) deliberately, and without any exterior provocation, organises in one spot of the body a drain which becomes so ample as to starve the remainder; the circumstance that this flux is not a single emptying out of some previous local accumulation (such as one sees in the pointing and discharge of an abscess) but is a persistent process, depending day by day on new acts of growth; the observation that the tendency to the disease is in many instances hereditary; the existence of a marked cachectical state which precedes, as well as accompanies, the evolution of the tumour; and, most of all, that flagrant evidence of metastasis[1] which daily renews itself for our instruction, consisting in the failure of surgical operations, by reason of the obstinate emergence of the disease, even again and again, in parts previously uncontaminated by its presence:—these arguments are to my mind as conclusive for the constitutional and purely constitutional origin of cancer, as any which I could adduce to show you the constitutionality of small-pox or gout.

"Thus much is beyond question. And, while I tell you that a cancerous tumour is an organisation for excretory purposes, I wish I could go further, and could explain to you what is that mysterious condition of system in which this eliminative effort has its root; what it is that enables and induces the blood thus to starve those various organs which are the natural claimants of its substance, and thus to waste itself in works of supererogation. We have seen parasites acting thus by the body; we have seen the blood involuntarily yielding up its richness to their extraneous suction. But here the case is quite different; the blood seems (if I may use the phrase) spontaneously and voluntarily, and under no pressure of local circumstances, to set about constructing an organ for the appropriation and discharge of its own blastema. It is from sedulous chemical investigations alone, that we can hope for light on this most difficult subject: from such investigations, I mean, as will compare the total chemistry of the cancerous body—blood, tumour, excretions—with the total chemistry of the healthy body; and especially will found themselves on an exact and comprehensive knowledge of those natural changes which occur in the progressive and regressive metamorphoses of the blastema of the blood. Hitherto the chemists have done nothing for us in respect of this disease; and till they have furnished us with the information just indicated, our hopes of cure must necessarily

[1] "I am content to rest my justification of the word "metastasis", on the habitual return of the disease after operations, even when they have been performed with the best apparent prospect of success. But a case is quoted, on the authority of Parent-Duchatelet, which looks more like what is generally recognised as *metastasis*, namely, that the disease spontaneously deserts one site, and simultaneously addicts itself to another. As a solitary instance, it adds little or nothing to the evidence of surgical practice; but I transcribe the case for its curiosity:—'A woman,—after having suffered for a length of time from a tumour in the breast, which possessed all the characters of non-ulcerated scirrhus, and after having presented the symptoms of cancerous cachexia in so marked a manner, that Dupuytren not only refused to remove the diseased organ, but dissuaded Parent-Duchatelet from the use of leeches,—was seized with remittent cephalalgia of intolerable violence; at the same the mammary growth ceased to be painful, and eventually disappeared almost completely. Apoplectic symptoms, with hemiplegia, supervened, were combated with the ordinary means, and recurred twice before the patient's death, which took place ten weeks after the first apoplectic seizure, and two years after the supervention of the symptoms in the breast. On *post-mortem* examination, a tumour of the size of a nut, and possessing (according to Cruveilhier) the characters of carcinoma, was discovered floating, as it were, in a quantity of diffluent brain.'"

remain dormant, or must content themselves with speculative and empirical endeavours. For pathology distinctly traces a chemical function in the disease, and shows that it is from the basis of chemistry alone that any rational cure of the disease may possibly be argued out.

"In the ground we have gone over, you will have seen what it is which constitutes the so-called *malignity* of cancer, and which assigns it a separate place and a higher importance in the list of morbid growths; this, namely, —that the cancerous tumour is a mere symptom of constitutional disease, a mere phenomenon locally arising in a concentrated act of the entire system, as demonstrably and as simply as a paroxysm of gout is the local product and local evidence of a general disorder." (pp. 152-155.)

Scrofula is the subject of the Ninth Lecture. Mr. Simon very strongly, and we think rightly, insists upon the fact, that tubercle is the essential and diagnostic product of scrofula. He believes it to be strictly hereditary, and very difficult of artificial production. He does not absolutely deny that it may be so produced, but shows that it is much more rarely so done than is generally imagined, and that many of the recorded experiments are fallacious.

"Having spoken of experiments performed on the lower animals, I feel bound to caution you against a too implicit belief of all you may read in books as to the experimental production of tubercle. Statements on this subject have been made and disseminated too hastily. For instance, rabbits are cited by authors, as peculiarly prone to become subjects of the disease. 'A rabbit, fed in a damp, dark cellar, on watery vegetable food (says Mr. Phillips), soon becomes the victim of tubercular deposits.' There are certain influences (says Dr. Walshe) 'which experience has proved to lead unfailingly to the development of tubercle in the liver of rabbits.' Four or five years ago, when I was busy with experiments on this subject, I received from a friend the so-called tubercular liver of a rabbit; the deposit was white, not very firm in any part, and in some spots diffluent; it extended in several directions throughout the thickness of the organ, reaching its surface, and bulging it at various points; but there was something in its appearance which struck me at first sight as unlike tubercular deposit; it appeared continuous in lines, rather than in masses; it seemed to branch, too, in the direction of the ducts, as though it were dependent on their anatomical arrangement. I proceeded to examine it with a high power of the microscope, and found, to my astonishment, that the whole mass consisted of the minute oblong eggs of some entozoon. The fact seemed likely to be of importance, and consequently I followed up the observation by others. On inquiry of a *candid* poulterer (for the sellers of eatable stock are naturally reluctant to admit the possibility of disease in their animals) I found that these 'tubercular' livers are common—very common; that they will be found often in almost every tame rabbit cut open, and in litter after litter; and, strangely enough, that they do not appear incompatible with good health, or at least with health sufficiently good for market purposes. Now, I examined dozens of these livers, always with the same result; and I may mention to you, as of some interest in relation to the habits of the entozoon, that while engaged in these examinations, I found the same ova in the gall-bladder and in the whole length of the intestinal canal; in several parts of the latter (as *e.g.* in the cæcum) I observed them actually following the inflexions of the mucous membrane, and lining its follicles almost like an epithelium.

"In continuation I made various experiments, to see if I could produce tubercle artificially, and various other examinations to see if I could find it in rabbits dying under other circumstances. The result may be told in a word: I have never seen tubercle in a rabbit. I do not wish you to infer from this, that rabbits are insusceptible of the disease; my knowledge by no means extends to this; there may have been some share of accident in my non-observation of tubercle among so many specimens; and other more for-

tunate observers may have witnessed the disease, perhaps frequently. But what I would insist on is, that the artificial producibility of tubercular deposit is by no means the simple and straightforward process it is supposed to be. So far as the belief in it depends on such statements as I have cited to you, I feel bound to caution you against its reception ; and I would even venture to say, that at the present moment the balance of evidence is against the supposition that tubercle can be produced in animals by any of the means which I have specified.

"For I may inform you in addition, that, not only in rabbits, but in sheep, and in cats or dogs which have been made the subjects of experiment, a very large proportion (I refrain from saying *all*) of the alleged tubercular deposits, artificially produced, prove, on careful examination, either to be instances of parasitic development in the substance of the lungs, or to consist of some other morbid product utterly unlike human tubercle." (pp. 166-168.)

Our author's general views are thus summed up. "The material products of the scrofulous diathesis consist in some mis-developed proteinous ingredient of the lymph and blood. The essence of this mis-development lies in the fibriniform solidification and concretion of something which should remain fluid in the plasma of the blood. I call it *fibriniform*, because—though it is not identical with fibrin, it probably arises in some analogous method of formation, and undergoes similar final metamorphoses. This solidification occurs in the ascensive development of the lymph and blood : it occurs with an infinite preference in the lymph-glands and in the lungs ; in the former, where lymph is brought into intimate relations with arterial blood ; in the latter, where lymph (which is constantly accruing to the blood) first comes into immediate relations with the atmosphere. It seems then to affect the total blood, only by reason of the lymph which is contained in it ; in other words, not to be a disease of the total blood, but one of the lymph or nascent blood. Precipitability by the atmosphere is the characteristic of this morbid product ; its places of election are determined by this peculiarity : tubercles form, where lymph and blood get their first opportunities of increased oxidation. In accordance with this law, venosity of the blood precludes the tendency to tubercular deposition. The fibriniform product of scrofula is insusceptible of development : it is a dead concretion. Like true fibrin, it may become the seat of calcareous deposit, and may thus form a permanent inorganic concretion. Like true fibrin, it chiefly tends to soften, and its softened substance is copiously infiltrated with fat : probably it undergoes a fatty degeneration. The diathesis in which tubercular deposits occur, is accompanied by a remarkable tendency to the accumulation of fat in the liver, and to the fatty degeneration—either of the substance of other organs, or of some previous infiltration in those organs : possibly this tendency may indicate that the fibriniform material of tubercle in its molecular state can undergo, either in the blood, or in those organs, the same degenerative changes as affect it in its concrete condition. In short, the scrofulous diathesis consists in an inherited peculiarity of blood-development, under the influence of which the nascent blood tends to a molecular death by super-oxidation ; partly it may appear that these dead proteinous elements can undergo, within the stream of the circulation, such degenerative changes as will qualify them for discharge by excreting organs ; partly it may appear that these changes lead to fatty accumulations in the endothelium or in the parenchymatous blastema of such organs ; but mainly and characteristically, it is the way of those dead proteinous elements to concrete in the organs where their precipitation has been determined, and there to construct the fibriniform masses called *tubercle*. These masses undergo changes of deliquescence and destruction, which tend to their ultimate expulsion from the system, but which, as they entail the disorganisation of all surrounding textures by inflammatory and ulcerative processes, are commonly defeated in this tendency when they occur in vital organs (as the lung) or attain it

by the complete sacrifice of the invaded organ, as when present in lymph-glands, testicle, or breast.

"I have told you that cancer and tubercle are incompatible diseases—that the one excludes the other. You cannot wonder at this. They are pathological antitheses in regard of the blood. In the one case, if I may use so strong a phrase, the blood dies still-born; it never attains its maturity of growth or function; it stops short of the distributive arteries of the body; it never reaches the aorta; it perishes and decays on the threshold of the circulation. In the contrary case of cancer, there is an obstinate excess of vitality, which will not be quenched. You remember how the blood's plasma, as though out of a luxuriance of life, contributed—not to perishable concretions, but to profuse living growths; you remember how these growths, tending to an effort of elimination, still maintained an interrupted dependence on the blood, constituting the strange paradox of an organised excretion; you remember how they evolved themselves with exhaustive rapidity out of a too fructifying blastema, vegetating without limit at the expense of other organs, till the whole fluid of the circulation seems to devote itself, away from its slower and legitimate uses, to this impetuous by-play of organisation." (pp. 185-187.)

The Pathology of the Nervous System forms the subject of the Tenth Lecture, which is one of the most interesting and valuable of the whole. We must, however, content ourselves with this simple statement, for condensation would only spoil what is already quite full of matter, and a mere selection of parts would give no right idea of the whole.

The Eleventh Lecture is occupied with the subject of Evacuative Medicines in Relation to Humoral Pathology, and exhibits a melancholy, and, we cannot but think, somewhat overdrawn picture of the deficiencies of our knowledge of therapeutics, and of our impotence as respects the treatment of humoral diseases. We are deeply sensible of the great necessity which exists for more complete and more exact inquiries into the actions of medicinal agents, and agree with Mr. Simon in thinking, that full chemical examination of the blood and the excretions in health, in disease, and under the operation of particular remedies, is the right method for arriving at satisfactory conclusions. But we think more has been already done than he gives us credit for, and were surprised to find no reference whatever to the investigations of Mialhe, or to the very valuable observations of Dr. Golding Bird, on what he has denominated chemical diuretics.

The last Lecture treats of Morbid Poisons, and is undoubtedly one of the most interesting of the whole. After showing the general characteristics of these poisons, and their distinction from ordinary poisons, and illustrating their operation by the phenomena of continued fever and small-pox, he enters into the following explanation, which appears to us to give about the clearest idea of the events that we have met with anywhere.

"We have it accordingly demonstrated, that for the production of the disease there must be a *specific internal*, as well as a *specific external* condition; that the former is liable to be exhausted; and as it becomes exhausted in the production of material phenomena (namely, in the generation of pustules), therefore, obviously, it must itself be a *something material*, like that outward condition with which it cooperates; as the *poison of small-pox* is a something material and tangible, so the *susceptibility to small-pox* is a something material and tangible. Of this material—whatever it may be—no trace remains in the blood, when the disease has completed its course.

"Thus we get a general formula for the pathology of small-pox, which will be useful as a standard of comparison for the other poisons in our list. A certain organic material, A, soluble and partially volatile, affects particular relations with B, an ingredient (apparently a normal ingredient) of the blood: the result of their coming together are (1) the utter destruction of the latter, B; and (2) the immense increase of the former, A; not indeed at

the spot of infection, but elsewhere. On the one hand, the *virus* augments so much that it is found all over the body, forming innumerable pustules, and contaminating the breath with its volatile miasma ; on the other hand, the inward natural *ingredient of the blood* simultaneously diminishes, and at the end of the process is found totally exhausted.

" Look at this as a chemical experiment : you add A to B ; presently you find that B has vanished, and that A has undergone an immense augmentation. What is the meaning of this ? What has become of B ? Whence has the new A been derived ? It is difficult to avoid the conviction, which arises with almost logical certainty, that the increase of one material, and the decrease of the other, have stood in essential mutual relation ; that, in short, it has been a process of *conversion ;* that the essential relation of the two matters (that derived from *without,* and that contained *within* the blood) has consisted in the ready convertibility of one into the other ; that the specific power of the virus is its power of effecting this transformation, and no other.

" Finally, that material of the blood in which the virus of small-pox effects this peculiar change, seems, though a *normal* constituent, to be no *essential* one ; for the patient convalescent from small-pox, though with no demonstrable trace of that constituent in his blood, returns to at least as good health as he ever enjoyed previously. It may be added, too, that in a certain very small proportion of persons this natural ingredient of the blood appears to be not *uniformly* present ; for there are persons (apparently undefended by any previous occurrence of the disease, or by other known means) in whom your original inoculation would have failed ; persons, who would have shown a non-infectibility by the poison, and who therefore must (at least, for the time) have been without that material in their blood which constitutes the susceptibility to the disease." (pp. 263-4.)

The modified severity of attacks produced by inoculation is thus accounted for. " I may take this opportunity of explaining to you a difficulty which arises in the doctrine of morbid poisons, from considering the mitigation which their severity often appears to undergo, when they are infected by artificial inoculation. It appears, that while infection is the certain test and evidence of certain materials in the blood, inoculation is, in many cases, a much finer test than can be afforded by atmospheric inhalation ; and, as the severity of symptoms will be in proportion to that chemical state of the individual by which he is infectible, so I would explain the frequent comparative mildness of inoculated small-pox. By inhalation of the volatile virus, fewer would be affected, but those few would have the disease severely ; this method of infection including only those persons who possess a great abundance of the material which renders infection possible, and who (by reason of their large possession of that material which leads to the production of symptoms) would naturally suffer much ; while the process of inoculation (being, as I expressed it, a finer test) will elicit evidence of the disease from a far larger number of persons, will include many who possess a minimum of the symptom-producing material, and who, for that very reason, will suffer the disease in its mildest form. On the same principle, I would explain that other fact, well known in practice, that on the first invasion of an epidemic, the proportional mortality is greatest ; while later in its progress (when far larger numbers are attacked), the proportion of recovery is increased. At the commencement of the epidemic, the exterior causative influence is at its minimum : those only contract the disease at this period who possess, in an extreme degree, that interior condition which constitutes the specific susceptibility, and which (as I have already explained) measures the severity of an attack in exact proportion to the facility with which it is incurred." (pp. 267-8.)

Mr. Simon reviews at considerable length the two great theories of infection—*contagium animatum* and *fermentation*, and rejects both. His own views may be in part gathered from the following summary.

"Therefore, gentlemen, as respects those instances of human morbid infection with which we are best acquainted, we may recapitulate our facts, and state our theory, in the following terms: that certain materials of the blood —materials not essential to the performance of its nutritive functions—are, by certain circumstances, rendered liable to undergo definite and specific changes; under the influence of which they become determined, with increased rapidity, to the outlets of the body, and irritate these outlets in their passage; that these changes continue, until the materials affected by them are completely exhausted from the blood; and that the severity and duration of those changes is in proportion to the quantity of material seeking elimination: that the new matters engendered and evolved under these circumstances are capable, in various ways, and with more or less certainty, of producing a precisely similar succession of changes in the blood of another individual, or of any number of individuals; operating always on the same ingredients of the blood as that whence themselves arose, and determining it to the same outlets as that whither themselves were determined; so that the choice of material in the blood, and the choice of outlet in the body, constitute specific characters for the several morbid poisons distinctively, and so that the final products act always as special catalytics for that original material of the blood, wheresoever they may encounter it. But, finally, that under certain possible conditions of accumulation, or tension, in that original material, other circumstances may serve to start it in its progress of specific decomposition, without any demonstrable influence from that exterior catalytic, which is the ordinary occasion of its change." (pp. 285-6.)

We have thus concluded our task, which has been a very pleasant one; and in taking leave of the volume we heartily thank Mr. Simon for the instruction he has communicated to us in a form so agreeable, and strongly advise our readers to peruse the original for themselves.

Action of the Muscular Coat of the Bronchial Tubes in Respiration. By C. Radclyffe Hall, M.D. pp. 24. Worcester: Deighton and Co. 1850.

The object of this essay is to prove that the views of Reisseisen upon the regular and rhythmical action of the muscular coat of the bronchial tubes during respiration, may be sustained by experiment and by reasoning. The general opinion of physiologists has been against these views; and their objections are stated and combated by Dr. C. R. Hall with great acuteness and ability. His experiments clearly prove that when the vagus nerve in some animals had been divided, regular although rapid contractions of the lungs might be caused by the agency of galvanism applied to that portion of the nerve which descended to the lungs; thus shewing, in opposition to the views of most physiologists, that the bronchial muscular fibres are capable of rhythmical contraction, and that they are under the influence of the nerves. The objection made by Müller, that if the muscular coat of the bronchial tubes acted rhythmically in respiration, it would have to be under the influence of the will, is easily disposed of by Dr. C. R. Hall, who observes that the diaphragm and other respiratory muscles present rhythmical contractions which are not quite independent of the will, and that the heart exhibits rhythmical contractions which are quite independent of the will, and therefore that the more or less subordination of the will cannot be the condition on which rhythmical action depends. Although Dr. C. R. Hall succeeded in producing rhythmical contractions by stimulating the divided vagus nerve in a rabbit and in a fowl, yet in frogs, whose lungs possess no muscular coat, the stimulation of the vagus produced no such effect, but the expanded air-bag emptied itself by the mere force of its elasticity. Hence the author concludes that where there is no muscular coat, there are no rhythmical contractions. Dr. C. R. Hall draws an ingenious analogy between the respiratory

function in the fish and that performed by the mammalia. In the former, there are two distinct acts of respiration, namely, the deglutition of water by the mouth, and its ejection from the gills, and Dr. C. R. Hall suggests that these alternate and rhythmical actions may be effected by the relaxation and contraction of the interbronchial muscle, which is therefore analogous to the bronchial muscle of the mammalia, the act of expelling the water from the gills corresponding to the act of expiration, and the interbronchial muscle operating as an expiratory agent. In the mammalia, it may be presumed that the ordinary exciting cause of inspiration is distention of the capillaries of the lungs with carbonized blood, and the exciting cause of expiration, the presence in the air-cells and bronchial tubes, of unduly carbonized air. The author concludes that although many of the phenomena of respiration may be explained by the elasticity of the bronchial tubes, yet that the alternate acts of inspiration and expiration are regulated by the rhythmical action of the bronchial muscles.

Such is a very imperfect abstract of Dr. C. R. Hall's views. Regretting that our limits do not enable us to follow the author through all his experiments and arguments, we recommend his valuable essay to the careful attention of those who are interested in this branch of physiology.

Scale of Medicines with which Merchant Vessels are to be furnished, by Command of the Privy Council for Trade: with Observations on the means of preserving the Health, and increasing the Comforts of Merchant Seamen; Directions for the Use of the Medicines, and for the Treatment of various Accidents and Diseases. By T. Spencer Wells, F.R.C.S., Surgeon, Royal Navy. pp. 190. London: 1851.

This is an unpretending little volume, written by one thoroughly acquainted with his subject. Mr. Wells has evidently founded his practice upon a considerable amount of experience and observation, as well as upon a judicious study of the best writers. His remarks upon *ventilation* are particularly good. It is distressing to reflect that a very little attention to this subject would have prevented several recent disasters attended with much loss of life, from the immuring of multitudes of people under hatches in bad weather. In treating of *diet*, the author justly prefers meat which is preserved in close vessels to that which is salted; and he also states his opinion that in all large ships, and certainly in all steam-ships, it is quite practicable to convert salt water into water which is fit for human consumption. Some observations are arranged alphabetically upon the accidents and diseases to which seamen are most liable, and a scale of medicines and medical stores is appended. Short practical descriptions are given of the most common forms of disease, and their treatment is also concisely laid down. The doses of medicines, and their mode of administration, are also carefully detailed. In cases where a ship is sent to sea without a medical practitioner on board, this little work will prove extremely useful.

We cannot omit this opportunity of remarking that far too little attention is generally paid in merchant versels, even of the first class, to the selection of efficient medical practitioners; and we have reason to fear that *cheapness* is the chief consideration with owners in making these appointments.

Dr. Hooper's Physician's Vade-mecum; or a Manual of the Principles and Practice of Medicine. By Wm. Augustus Guy, M.B. Cantab. *New Edition.* pp. 576. London; 1851.

This is an improved edition of a deservedly popular work. Students and practitioners will find it a well arranged and trustworthy book of reference. The formulæ are judicious, and are eminently calculated to assist the young prescriber.

LETTER TO THE RIGHT HONOURABLE LORD CAMPBELL, LORD CHIEF JUSTICE OF THE COURT OF QUEEN'S BENCH, ON THE CLAUSE RESPECTING CHLOROFORM IN THE PROPOSED "PREVENTION OF OFFENCES BILL". By JOHN SNOW, M.D.

It is a pity that when legislators set about making laws, they do not take council with competent advisers. Lord Campbell's domains are law and literature; but in the department of toxicology he has assuredly no status; and this Dr. SNOW has seasonably shown in reference to chloroform. We hope that the noble and learned lord will reassure the public, and admit that assaults cannot be facilitated by means of this drug.

The following passages from Dr. Snow's letter (which we regard as a valuable contribution to state-medicine) are interesting and conclusive.

"The prominent mention of chloroform, in the fourth clause of the Bill presented by your lordship to the House of Lords, on the 24th ult., is to be regretted on other grounds. It ill becomes the gravity of the law, and is, I feel assured, far from your lordship's intention, that a legal enactment should be made on a false alarm, or to meet a trivial and unsuccessful innovation in the mode of attempting a crime: to legislate on this matter would revive the groundless fears of the public, which have subsided, or been allayed; and might even cause evil-disposed persons to make trial of a means, which they would conclude to be not without efficiency, when it had given rise to a law for its suppression. There is no reason to believe that chloroform has been employed in more than two instances with criminal intent; and so far from aiding the perpetration of crime, it has led to the immediate detection of the offender, on both occasions. The knowledge of these two cases is more calculated to deter from similar attempts, than any increase of the punishment, which a culprit might expect to escape altogether, by avoiding detection.

"When administered gradually, chloroform can be breathed easily enough, by a person willing and anxious to take it; but he has to draw his breath many times before he becomes unconscious. During all this interval, he has a perfect perception of the impression of the vapour on his nose, mouth, and throat, as well as of other sensations which it causes; and every person who has inhaled chloroform retains a perfect recollection of these impressions and sensations. If chloroform be given to a child whilst asleep, the child awakes, in nearly every instance, before being made insensible, however gently the vapour may be insinuated. No animal, either wild or tame, can be made insensible, without being first secured; the chloroform may, it is true, be suddenly applied on a handkerchief to the nose of an animal, but the creature turns its head aside, or runs away, without breathing any of the vapour. If a handkerchief, wetted with sufficient chloroform to cause insensibility, is suddenly applied close to a person's face, the pungency of the vapour is so great as immediately to interrupt the breathing, and the individual could not inhale it, even if he should wish. From all these facts it is evident that chloroform cannot be given to a person in his sober senses, without his knowledge and full consent, except by main force. It is certain, therefore, that this agent cannot be employed in a public street or thoroughfare; and as the force that would be required to make a person take it against his will, would be more than sufficient to effect a robbery, and enough to effect any other felony by ordinary means, it would afford no help to the criminal in more secluded situations. Supposing that the felon or felons could succeed in keeping a handkerchief closely applied to the face, the person attacked would only begin to breathe the chloroform when thoroughly exhausted by resistance or want of breath, and when, in fact, the culprits could effect their purpose without it. * * * *

"On January 10th, a robbery was committed in Thrall Street, Spitalfields, for which two women, named respectively Elizabeth Smith and Margaret Higgins, were examined three or four times at Worship Street, tried at the

Central Criminal Court on February 8th, convicted, and sentenced to be transported for fifteen years. The following is the evidence given by the prosecutor, at one of the examinations before Mr. Hammill. He was proceeding along the Whitechapel Road, between 9 and 10 o'clock in the evening, 'when he felt some one, whom he believed to be a woman, touch his left side, and at the same time felt a rag or handkerchief pressed over the lower part of his face. He instantly became insensible, and was conscious of nothing that occurred to him, until about day-light the following morning, when he slowly revived, and upon recovering sufficiently, found himself lying in a very dirty bed, in a wretched apartment.' (*Times*, January 25, 1850.) It will be observed by your lordship that the witness gives no account of either the local or general sensations which chloroform causes. He felt a handkerchief or rag applied to his face, and instantly became insensible. This circumstance alone indicates that chloroform was not the agent employed. But there are other reasons which prove the view I entertain of the matter. Whitechapel Road is a very busy thoroughfare between 9 and 10 in the evening; and admitting that a gentleman could be made insensible in the instantaneous manner alleged, without the opportunity of making the least resistance, or calling for assistance, it is impossible that he could be dragged, or otherwise conveyed, in that state to another street, without attracting the attention of passers by, and even causing the collection of such a crowd as would ensure the interference of the police. As the effects of chloroform subside very rapidly when quickly induced, the dose would, moreover, require to be repeated, before the victim could be conveyed a distance of two or three hundred yards. If the transaction occurred at the time and placed alleged, the prosecutor, however insensible he might be, must have appeared to accompany the woman voluntarily; but I know no drug which can be administered on a handkerchief to produce effects of this kind, and am inclined to believe that the agent which could cause such results must be more subtle than anything that can be contained in an apothecary's phial. Whether it was witchcraft, animal magnetism, or some other invisible kind of attraction, I shall not attempt to decide. The long continuance of the insensibility (ten hours) in this case, shows that it was not caused by chloroform, the effects of which pass off in a few minutes, or, at the longest, in half an hour; and this remark applies to every substance that will quickly cause insensibility, when breathed from a handkerchief; for the volatility which enables it to be taken in this way, causes its ready elimination from the blood, in its passage through the lungs. It must be concluded, therefore, that the insensibility, in this instance, was caused by something which had been swallowed. Laudanum, ardent spirits, and fermented liquors, are articles which are capable, amongst others, of causing prolonged stupor, but there are no means of ascertaining now what might have been used. After the examination of the prisoners in this case had been two or three times adjourned, a woman came forward and gave evidence that, on an occasion previous to the robbery, the prisoner Higgins 'had told her that a man named Gallagher, with whom she cohabited, had undergone an operation at the London Hospital, where they had given him some stuff to send him to sleep, and that he had contrived to bring some of it away with him from that institution.' (*Times*, January 25, 1850.) The medical officers of the London Hospital have no knowledge of any chloroform having been taken away by a patient; and it must occur to your lordship that the statement of a person who alleged that she had been in the confidence of the thief, and had kept her unlawful secrets for a long time, carries with it no great weight. Whilst the alleged action of chloroform in the above instance was too instantaneous, in the other case of alleged robbery by means of this agent its reputed action was so long deferred, as to prove clearly that it proceeded from a different cause.

"Charlotte Wilson was tried at the Surrey Adjourned Sessions, on February 9th, 1850, for a robbery committed on a man in the beginning of the

previous month. The prosecutor stated that he was walking along the Borough, towards London Bridge, when he was accosted by the prisoner, who passed a handkerchief across his face, and he became very unwell. Not suspecting that any narcotic was contained in the handkerchief (a circumstance which alone is sufficient to prove that no chloroform was used), he ran into a public-house hard by, and called for a glass of brandy. A police constable stated that he saw the prisoner accost the prosecutor, and pass something across his face. He then saw them enter the public-house, when he saw the woman drinking with the prosecutor. About ten minutes afterwards he saw the prisoner run out of the house with a hat and scarf. The prosecutor was at that time insensible.

"The effects of chloroform are induced whilst a person is breathing it, and attain their greatest intensity within twenty seconds after the inhalation has ceased; it is consequently impossible for a person to go into a public-house, and be seen drinking there, between the time of taking the chloroform and the insensibility induced by it. The man was a considerable time before he recovered his senses; another circumstance which proves that the stupor had not been caused by chloroform. A non-medical witness, who gave evidence before the magistrate, was confident that the stupor or insensibility was not caused by liquor, but by some deleterious article such as chloroform. The court and jury who tried the prisoner were of the same opinion, and she was sentenced to be transported for ten years, although a student from any hospital in London could have informed the court that chloroform had not been employed. The landlord of the public-house in which the robbery was committed, said that the prosecutor appeared to be in liquor when he entered. This evidence may be safely received; for a publican could not be deficient in experience on this point, and could hardly be influenced by prejudices that would lead him to consider a customer intoxicated who was not so. This evidence being admitted, the case is perfectly clear; for nothing is more common, when a person in liquor goes on drinking, than for him shortly afterwards to be lying insensible. * * *

"On April 30, 1850, a young man, named Charles Jopling, was placed at the bar, before Mr. Broughton, at the Marylebone Police Court, charged with having attempted to administer chloroform, with intent to violate a young woman, to whom he had been paying his addresses for nine months. It was proved, that whilst returning from a concert at a public-house, about one o'clock the same morning, the prisoner induced the complainant to accompany him down a yard, when he uncorked a phial, poured the contents on a handkerchief, and applied the latter to her face. She immediately pulled away the handkerchief, and called out so loudly that she obtained the assistance of a policeman from the neighbouring street, who took her assailant into custody. When asked by the magistrate if she felt any ill effect from the application of the handkerchief, the complainant replied as follows: 'I did not, your worship, as I pulled it away from my face instantly; it was completely saturated with wet, and had a remarkably strong smell.' The prisoner was remanded, and bail was accepted for his appearance on a future day. During this interval he married the young woman, and at the next examination she begged for his discharge. After a further remand, and a severe lecture, the worthy magistrate reluctantly surrendered the prisoner to his wife, who, if she does not remain of the same forgiving disposition, doubtless finds means of punishment as severe as any which the law had in store for him.

"In October last, a man named Charles Venn contrived to secrete himself under a bed, in an hotel at Kendal, and attempted to give chloroform, at midnight, to an elderly gentleman in his sleep. The effect of this attempt was to awake the gentleman; and although the robber used such violence that the night-dress of his victim was covered with blood, and the bedding fell on the floor in the scuffle, he did not succeed in his purpose. The people

in the house were disturbed, and he was taken into custody, and ultimately sentenced, at the Westmoreland Michaelmas Sessions, to eighteen months' imprisonment with hard labour, including one month's solitary confinement.

"A crime was committed in France on a person under the influence of chloroform, but not by the agency of that article. The chloroform was voluntarily inhaled by a female, for the lawful purpose of having a tooth drawn without pain, and the dentist took advantage of the stupor so induced, as he might have done of a fainting fit, or any other kind of insensibility, to effect violation.

"I trust that I have said sufficient to induce your lordship to consider whether it would not be advisable to withdraw the word chloroform, the presence of which can only be alarming to the public, suggestive to the criminal, and little creditable to the sagacity and gravity of the law; whilst its removal would not affect the operation of the act, even in a case, should such a one again occur, in which it might be foolishly attempted to exhibit the article.

"In conclusion, I will venture to make a few additional remarks on the operation of the fourth clause of the bill presented by your lordship.[1] All the dietetic and medicinal, as well as other narcotics, are capable of causing stupor when taken in sufficient quantity. The stupifying or overpowering matters in most frequent use in this country, are ardent spirits, wine, and beer. I conclude that the clause under consideration does not apply to spirituous and fermented liquors, when openly given, with whatever intent, but to the fraudulent administration of other substances, similar in action, but more powerful. It cannot be denied that opiates are sometimes exhibited, with felonious intent, in malt liquor, the bitterness of which disguises their taste, and such a crime cannot be too severely punished; but it would be a great error to conclude that the offence called *hocussing* is so common as the statements of prosecutors at the police courts would imply. Persons who have been dead drunk are very unwilling to admit, even to themselves, that the result was the consequence of their own voluntary potations, and still less willing to admit it to the world, when they have to complain of having been robbed whilst in bad company. Therefore, before such evidence is received as conclusive, it should be confirmed by chemical analysis, or in some other way; otherwise errors may occur, such as that at the Surrey adjourned sessions, alluded to above.

"The rapid supervention of stupor ought not to be accepted as proof that it was not occasioned by spirituous or fermented liquors, for these articles sometimes produce their effects with great velocity. Ardent spirits, indeed, under some circumstances, act with greater rapidity than almost any thing else except prussic acid, and on some occasions are not even surpassed by that poison. * * *

"At the trial of Johannah Driscoll at the Central Criminal Court in December last, for a robbery committed in a house of ill fame, it was alleged that chloroform might have been put into some gin taken by the prosecutor. Chloroform, however, although very soluble in rectified spirit of wine, does not mix easily with potable spirits, and when dissolved imparts to them such a very hot and sweet taste, that no one could take them without being aware of the adulteration."

---

[1] The clause runs as follows. "And whereas it is expedient to make further provision for the punishment of persons using chloroform or other stupifying things, in order the better to enable them to commit felonies: be it enacted, that if any person shall unlawfully apply or administer, to any other person, any chloroform, laudanum, or other stupifying or overpowering drug, matter, or thing, with intent thereby to enable such offender, or any other person, to commit any felony upon the person to whom the same may be applied or administered, or attempted to be applied or administered, or upon his or upon any other person's property, every such offender shall be guilty of felony, and being convicted thereof shall be liable, at the discretion of the court, to be transported for life, or for any term not less than seven years."

A Letter to the Right Hon. Sir George Grey, Bart., M.P., on some of the Social Relations of the Medical Profession. By George Robinson, M.D., Newcastle-upon-Tyne. pp. 28. London: 1850.

This pamphlet is written with some ability, and sets out with a profession of candour and impartiality; but, in the first few pages, the author has manifested such an utter ignorance of the condition of the general practitioners of this country, and of their relation to the different licensing boards, that we think it unnecessary to comment upon the statements he brings forward, or the plans of reform which he advocates. If Dr. Robinson had consulted the evidence, which is open to him and to all, upon the extensive strides which the general practitioners of this country have made since 1815, he would not have written so much that is absolutely inapplicable to the present state of the profession. He has represented that the Apothecaries' Act, of 1815, has degraded medicine to a trade! The effect of it has been precisely the reverse, for it has elevated a trade to a profession. The course of events, and the increasing spread of intelligence, may have rendered the Act inapplicable to the practitioners of the present day; but if the legislature should repeal it, they will no doubt substitute some other measure of equal, or of greater efficiency. In the meantime, good medical legislation is not likely to be forwarded by the publication of such essays as that of Dr. Robinson; in which the past and not the present state of the profession is made the basis of the proposed reform.

Pharmacopœia ad Usum Nosocomii Phthisicorum et Pectoris Morbis Ægrotantium accommodata. Editio secunda. pp. 42. Lond. 1851.

This is a very admirable collection of formulæ for the administration of medicines in the different stages, and for the relief of the various urgent symptoms which occur in phthisis and other diseases of the chest. Like the report which emanated[1] from the conjoined physicians of the Brompton Hospital, it bears the stamp of sound science and excellent practice. It ought, however, rather to be considered as a selection from the most commonly used prescriptions of the physicians of the hospital, than as a codex of simple or elementary formulæ equally calculated to assist the labour of the dispenser, and to prevent the prescriber from wholly falling into the routine exhibition of complex formulæ, the exact composition of which he may often fail to bear in mind. As hospital officinal preparations, the formulæ ought perhaps to have been simpler, more scope being left for each prescriber to adapt them by additions to the specialities of each case.

An example will best illustrate our meaning. Among the Misturæ, we find the following.

Mistura Strychniæ. ℞ Strychniæ semigranum, Acidi nitrici diluti fluidrachmam dimidiam, Acidi hydrocyanici diluti fluidrachmam, Misturæ camphoræ fluiduncias sex. Fiat mistura. Dosis ʒij ad ʒss.

In place of the above, we would prefer the following.

Mistura Strychniæ Nitratis. ℞ Strychniæ semigranum, Acidi nitrici diluti fluidrachmam dimidiam, Aquæ fluiduncias sex. Fiat mistura.

The mixture ought obviously to be called by its correct name; and as we presume it is chiefly used in the Brompton Hospital as a remedy for vomiting, the camphor mixture ought not to form a constant ingredient; for camphor is very disagreeable to some patients, and not very uncommonly creates nausea and vomiting: then, the prussic acid ought either to be acknowledged in the name of the mixture, or omitted as an ingredient, because it is a medicine at least as efficacious in allaying vomiting as the nitrate of strychnia. It is far better for each prescriber to add the prussic acid when he pleases; for the giving the two invariably in combination is quite unnecessary, and must effectually prevent a correct opinion being formed of the cases in which one or the other is specially useful. Pupils hearing the "Mistura Strychniæ"

[1] For a copious abstract of this Report, see London Journal of Medicine, for January 1850.

ordered, and observing the vomiting cured by it, might never think of turning up the pharmacopœia, and there learning that the relief might depend upon the hydrocyanic acid, and not on the strychnia.

The INHALATIONES require amendment. In the first place, the simplest and best method of *dry inhalation* is in the form of cigarettes. The substance (be it opium, conium, cannabis, etc., having been reduced to powder) is mixed with some mild and suitable substance, and then formed by the little machines (which may be had for a few pence in the Lowther Arcade) into cigarettes. Patients can easily be taught to draw the smoke into the lungs, and slowly expire it, as some amateurs treat the cherished fumes of "a mild Havannah". Medicinal cigarettes (following the formulæ of Dorvault, etc.), might, with very great advantage, be introduced into the Brompton Pharmacopœia. In *moist inhalation* there ought, we think, to be a large body of aqueous vapour, otherwise the inhalation is performed with difficulty ; the vapour only rising in abundance when excessive heat is applied. The following formula is calculated to bring a valuable medicine into discredit.

INHALATIO CREASOTI. Creasoti minima sex, Aquæ fluidunciam dimidiam. Inhaletur vapor (caloris ope) ex vase idoneo.

We have extensively prescribed creasote inhalations, and can testify to their signal utility in a vast number of cases. They promote expectoration, diminish excessive secretion in the air-tubes and from the interior cavities, remove fœtor when it exists, and have a general soothing influence. The creasote when inhaled must, however, to be of any use, be taken into the lungs without effort, and by inhaling freely, from a large-mouthed vessel, the steam of *creasote water*. Altogether, creasote is too little considered at Brompton. We would recommend the introduction of the creasote mixture of the *Edinburgh Pharmacopœia*, and also a mixture with mucilage. A creasote pill with crumb of bread would likewise often be useful. When the nitrate of strychnia and hydrocyanic acid do not remove sickness, creasote, in one or other of these forms, will rarely fail to give relief. When patients are taking the coarser kinds of cod-liver oil, the administration of a dose of creasote mixture, half an hour before each dose of the oil, will generally enable a squeamish stomach to retain it ; it will also be a valuable therapeutic adjunct to the oil in many cases.

There are only two formulæ for ENEMATA—the "Enema Catharticum" and the "Enema Opii". An enema of acetate of lead, another of nitrate of silver, and another of logwood are wanted ; for in the diarrhœa of phthisis they are all invaluable ; and in some cases, they may each in turn be required.

The only SOLUTIO is the following :—

SOLUTIO IODINII CAUSTICA. ℞ Iodinii, Potassii iodidi, singulorum unciam, Spiritûs rectificati fluiduncias duas. Solve.

A much milder solution of iodine is sometimes wanted as a daily application to the chest. The subjoined is a good formula : or the above may be diluted.

SOLUTIO IODINII MITIS. ℞ Iodinii et Potassii Iodidi, singulorum drachmas duas, Liquoris potassæ drachmas tres. Aquæ fluiduncias duas. Fiat solutio ope penicilli applicanda.

The only UNGUENTUM is the following :—

UNGUENTUM ANTIMONII POTASSIO-TARTRATIS. ℞ Antimonii potassio-tartratis drachmam, Adipis purificati drachmas tres. M. F. unguentum.

For most cases, this is too violent : but the prescriber can easily, *pro re natâ*, direct more lard to be added. To make a proper ointment, free from grittiness, the salt ought to be dissolved in a few drops of water before it is mixed with the lard ; and the addition of this, as a direction to the apothecary, would improve the formula.

From the tenor of our remarks it may be inferred, that it is easier to criticise a good Pharmacopœia than to compile even an indifferent one. No book of this class, we believe, can be made to suit the notions of every practitioner ; but there are few well-informed readers who will not derive practical hints from the perusal of the little work before us.

ALPHABETICAL CATALOGUE

Of the Papers which have appeared in the French Medical Journals for 1850.

BY ALEXANDER HENRY, M.D.

The following are the Journals referred to in this Catalogue, with the abbreviations used.

Bulletin de l'Académie Nationale de Médecine ...	Bull. de l'Acad. de Méd.
Comptes Rendus de l'Académie des Sciences ...	Compt. Rend.
Archives Générales de Médecine	Arch. Gén. de Méd.
Bulletin Général de Thérapeutique	Bull. Gén. de Thér.
Gazette Médicale	Gaz. Méd.
——— des Hôpitaux	Gaz. des Hôp.
L'Union Médicale	Union Méd.
Annales d'Oculistique	Ann. d'Ocul.
——— Médico-Psychologiques	Ann. Méd.-Psych.
——— d'Hygiène Publique	Ann. d'Hyg. Pub.

Abdomen, Phlegmon of Anterior Wall of. Bernutz (Dr. G.) Arch. Gén. de Méd., June and July 1850, vol. xxiii, 4th S., pp. 129, 290.

Accidents from Machines in Public Workshops. Ann. d'Hyg. Pub., April 1850, vol. xliii, p. 261.

Achromatopsy, new Observations on. D'Hombres Firmas (M.) Ann. d'Ocul., March 1850, vol. v, 4th S., p. 127; and Compt. Rend., Jan. 28 and April 1, 1850, vol. xxx, pp. 57 and 376.

Adansonia Digitata, Bark of, in Intermittent Fever. Pierre (M. Simon). Compt. Rend., July 22, 1850, vol. xxxi, p. 85.

Adenitis, Cervical: Extirpation of Glands. Larrey (M. H.) Bull. de l'Acad. de Méd., April 16, 1850, vol. xv, p. 619.

Adulteration of Food (bread). Chevallier (M. A.) Ann. d'Hyg. Pub., Jan. 1850, vol. xliii, p. 171.

Albumen of Blood and Organic Fluids, Physiological and Pathological Researches on; with description of an Albuminimeter. Becquerel (Dr. A.) Arch. Gén. de Med., Jan. and Feb. 1850, vol. xxii, 4th S., pp. 52, 156.

Albuminuria, connexion of with Amaurosis. Cucuel (Dr.) Union Med., Jan. 17, 1850, vol. iv, p. 30. Abeille (M.) Gaz. des Hôp., Jan. 15, 1850, vol. ii, 3rd S., p. 25. Landouzy (M. H.) Union Méd., Oct. 26 and 29, 1850, vol. iv, pp. 522 and 526.

Alcohol, Simple Means of Detecting the nature of Substances added to. Gaultier de Claubry (M. H.) Ann. d'Hyg. Pub., July 1850, vol. xliv, p. 48.

Ammonia, Liquid, Internal Use of. Tessier (Dr. N. B.) Bull. Gén. de Thér., 1850, vol. xxxix, p. 53.

Amputations, Celsus's method of Performing. Lacauchie (M. A. E.) Gaz. Méd., May 11, June 22 and 29, 1850, vol. v, 3rd S., pp. 360, 377, 467, 487.

Anæsthesia, and Anæsthetic Agents in Surgery. A critical abstract of the works published on the subject. Aran (Dr. F. A.) Arch. Gén. de Méd., March 1850, vol. xxii, 4th S., p. 308; Nov., vol. xxiv, p. 314. Local. Aran (Dr. F. A.) Bull. de l'Acad. de Méd., Nov. 19, 1850, vol. xvi, p. 114. Local, by means of Freezing Mixture. Velpeau (M.) Union Méd., April 6, 1850, vol. iv, p. 169.

Aneurism, Treatment of, by Galvano-Puncture. Bossé (M. C.) Gaz. Méd., Aug. 17, 1850, vol. v, 3rd S., p. 610. Of Ductus Arteriosus. Thore (M. Jun.) Arch. Gén. de Méd., May 1850, vol. xxiii, 4th S., p. 30. Of Subclavian Artery, successfully treated by Electro-puncture. Abeille (M.) Bull. de l'Acad. de Méd., April 9, 1850, vol. xv, p. 572. Arterio-venous. Roux (M.) *Ibid*, Nov. 26, 1850, p. 127.

Angina Tonsillaris, Treatment of, by Emetic Doses of Tartarised Antimony, without bleeding. Bourgeois (Dr.) Arch. Gén. de Méd., August 1850, vol. xxiii, 4th S., p. 436.

Ankylosis, Rupture of; Subcutaneous Section. Bonnet (M.) Gaz. Méd., May 25, June 1, 15, July 6 and 13, 1850, vol. v, 3rd S., pp. 395, 414, 449, 505, and 527. Philipeaux (M.) Bull. Gén. de Thér., 1850, vol. xxxix, p. 442.

Antimonial Powder, remarks on Employment of. Papillaud (Dr. L.) Gaz. Méd., Oct. 26, 1850, vol. v, 3rd S., p. 775.

Aphonia, Treatment of by Alum. Saucerotte (Dr.) Bull. Gén. de Thér., 1850, vol. xxxviii, p. 360.

Apoplexy, Rachidian. Gendrin (M.) Gaz. des Hôp., April 20 and 27, 1850, vol. ii, 3rd S., pp. 191 and 203.

Arm-presentations, Practical Observations on. Géry (Dr. L. H.) Bull. Gén. de Thér., 1850, vol. xxxix, p. 397.

Arsenic in Skin-diseases and Intermittent Fevers. Gibert (Dr.) Bull. Gén. de Thér., 1850, vol. xxxviii, pp. 193, 289, 439; vol. xxxix, pp. 103, 197, 251. Granules a preferable form for Administration of. Guillarmand (M.) *Ibid.*, 1850, vol. xxxix, p. 405. Cases of Poisoning by. Ann. d'Hyg. Pub., April 1850, vol. xliii, p. 420; Oct. 1850, vol. xliv, p. 433.

Arteries, Cases of Wounds of. Baudens (M.) Gaz. des Hôp., March 5, 1850, vol. ii, 3rd S., p. 109. Cicatrisation of, after Ligature: Secondary Hæmorrhage, and its Treatment. Notta (M. A. H.) Gaz. Méd., Dec. 7, 21, and 28, 1850, vol. v, 3rd S., pp. 870, 899, and 912. Of Hand (palmar arch), Forceps for arresting Hæmorrhage from. Galiay (Dr.) Bull. Gén. de Thér., 1850, vol. xxxix, p. 73.

Arteritis, Cl. Lect. on. Gendrin (M.) Gaz. des Hôp., July 30, Aug. 6 and 29, Sept. 12, 19, and 25, 1850, vol. ii, 3rd S., pp. 357, 370, 405, 429, 442, and 453.

Artificial Pupil, Formation of at the time of Operating for Cataract. Tavignot (Dr.) Gaz. Méd., Aug. 24, 1850, vol. v, 3rd S., p. 623.

Ascites, Treatment of, by Iodine Injections. Leriche (Dr.) Union Méd., February 7, 9, 12, 1850, vol. iv, pp. 65, 69, and 73. By Oily Inunction. Venturini (Dr.) Bull. Gén. de Thér., 1850, vol. xxxix, p. 32. Umbilical Paracentesis in: Production of Epiplocele. Forget (M.) *Ibid.*, 1850, vol. xxxviii, p. 481.

Assassination of Countess of Görlitz: Spontaneous Combustion. Tardieu and Rota (MM.) Ann. d'Hyg. Pub., July and October 1850, vol. xliv, pp. 191 and 363.

Atmospheric Pressure in relation to Respiration, Hæmatosis, and Capillary Circulation. Pravaz (Dr.) Bull. de l'Acad. de Méd., March 19, 1850, vol. xv, p. 520.

Atrophy, Progressive Muscular. Aran (Dr. F. A.) Arch. Gén. de Méd., Sept. and Oct. 1850, vol. xxiv, pp. 5 and 172.

Biogenic Law. Barbier (M. J. B. G.) Gaz. Méd., Nov. 30, 1850, vol. v, 3rd S., p. 850.

Bismuth, Trisnitrate of, in Large Doses. Monneret (M.) Bull. Gén. de Thér., 1850, vol. xxxviii, p. 433.

Bladder, Paralysis of, Treated by Electricity. Michon (M.) Bull. Gén. de Thér., 1850, vol. xxxviii, p. 348. Bonin (M. J.) *Ibid.*, 1850, vol. xxxix, p. 505. Neck of, Treatment of Diseases of. Civiale (M.) Gaz. des Hôp., April 6, 1850, vol. ii, 3rd S., p. 165.

Blood, Analysis of. Verdeil (M. F.), and Dollfus (M.) Compt. Rend., May 27, 1850, vol. xxx, p. 657. Researches on White Corpuscles in. Davaine (Dr.) Gaz. Méd., Dec. 7, 1850, vol. v, 3rd S., p. 884. Diminution of Fibrin in, by Running. Hervier (M. P.) *Ibid.*, March 30,

1850, vol. v, 3rd S., p. 243. Anæmia and Dropsy from diminution of Albumen in. Becquerel and Rodier (MM.) *Ibid.*, April 13, 1850, vol. v, 3rd S., p. 277. Human, Researches on Alkalinity of Serum of. Cahen (Dr., Junr.) Bull. de l'Acad. de Méd., July 2, 1850, vol. xv, p. 933.

Brain, Diseases of, Cl. Lect. on. Rostan (M.) Gaz. des Hôp., June 11, 15, and 22, 1850, vol. ii, 3rd S., pp. 274, 281, and 294. Relation of Symptoms to. Forget (M.) Union Méd., July 27, 1850, vol. iv, p. 366. Congestion of, Essay on. Bouchet (M.) Ann. Méd.-Psych., April 1850, vol. ii, p. 161. Tissue of, dried, medico-legal Researches on. Orfila (M.) Bull. de l'Acad. de Méd., June 25, 1850, vol. xv, p. 873; and Ann. d'Hyg. Pub., July 1850, vol. xxiv, p. 143.

Bronchocele, Extirpation of a. Roux (M.) Bull. de l'Acad. de Méd., Sept. 3, 1850, vol. xv, p. 1106.

Burns, Local Treatment of. Hervez de Chégoin (M.) Union Méd., August 13, 15, 17, 20, 31, and Sept. 2, 1850, vol. iv, pp. 394, 398, 401, 405, 426, and 429. General Treatment of. Hervez de Chégoin (M.) *Ibid.*, Nov. 19, 1850, vol. iv, p. 559.

Cæsarean Section, Case of. Beneys (Dr.) Bull. Gén. de Thér., 1850, vol. xxxviii, p. 545.

Cafeine and its Preparations. Dorvault (M.) Bull. Gén. de Thér., 1850, vol. xxxviii, p. 498. Citrate of, in Migraine. Hannon (Dr. J. D.) Union Méd., June 4, 1850, vol. iv, p. 270.

Calculi, Biliary, Diagnosis and Treatment of. Fauconneau-Dufresne (Dr.) Union Méd., Jan. 10, 1850, vol. iv, p. 18.

Calculus, Large Urinary, in a Woman, expelled Spontaneously. Forget (M.) *Ibid.*, Sept. 28, 1850, vol. iv, p. 473.

Cantharides, Ethereal Solution of. Œttinger (M.) Bull. Gén. de Thér. 1850, vol. xxxix, p. 261. Abs. in Lond. Journ. of Med., Nov. 1850, vol. ii, p. 1037.

——— Powdered, Detection of Adulteration of. Stanislas Martin (M.) *Ibid.*, 1850, vol. xxxviii, p. 35.

Carbon, Vegetable, in Idiopathic and Sympathetic Gastro-Intestinal Nervous Affections. Belloc (M.) Bull. Gén. de Thér., 1850, vol. xxxviii, pp. 54 and 204. Entrance of, and of other insoluble matters, into circulation. Œsterlen (M.) Gaz. des Hôp., Aug. 13, 1850, vol. ii, 3rd S., p. 383.

Cataract, slow Restoration of Sight after Operation of Depression for. Gosselin, (Dr. L.) Arch. Gén. de Méd., June, 1850, vol. xxiii, 4th S., p. 156. Black; its Diagnosis. Beauclair (M. A.) and Pétrequin (M. J. E.) Ann. d'Ocul., March 1850, vol. v, 4th S., p. 130. Abs. in Lond. Journ. of Med., Aug. 1850, vol. ii, p. 799. From Lightning. Rivaud-Landreau (Dr.) Union Méd., April 27, 1850, vol. iv, p. 205.

Chest, Sulphureous Waters of Enghien in Diseases of. Bolland (Dr.) Gaz. Méd., Feb. 2, 1850, vol. v, 3rd S., p. 87. Effusions in, especially Chronic. Gendrin (M.) Gaz. des Hôp., May 7 and 18, 1850, vol. ii, 3rd S., pp. 217 and 234.

Chloroform in Midwifery; Cases and Observations. Chailly-Honoré (Dr.) Union Méd., Feb. 21, 1850, vol. iv, p. 89. In Cutaneous Diseases and certain Nervous Affections. Devergie (M.) Bull. Gén. de Thér., 1850, vol. xxxviii, p. 345. Febrifuge and anti-periodic Properties of. Delioux (Dr. J.) Arch. Gén. de Méd., May 1850, vol. xxiii, 4th S., p. 51. Most frequent Cause of Accidents from Inhalation of. Angelon (M.) Compt. Rend., Jan. 7, 1850, vol. xxx, p. 5. Oxygen as an Antidote to Poisoning by. Duroy (M.) Union Méd., May 7, 1850, vol. iv, p. 221.

Chlorosis and its Treatment. Bull. Gén. de Thér., 1850, vol. xxxviii, p. 145.

Cholera in the Public Institutions of Paris in 1832 and 1849. Blondel (M.) (Analysed by Dr. Aran.) Union Méd., Oct. 26, Nov. 9, 1850, vol. iv, pp. 521, 541. Epidemic; Infection. Pellarin (Dr.) Bull. de l'Acad. de Méd., July 30, 1850, vol. xv, p. 988. Report of Commission on. Guérin (M. J.) *Ibid.*, July 30, 1850, vol. xv, p. 1023. Influence of Locality, Water, and Habitation, on Development of, in the South of France in 1834 and 1835. Fourcault (M.) Gaz. Méd., May 18 and June 1, 1850, vol. v, 3rd S., pp. 373 and 411. Influence of, on other Diseases. Limousin (M.) Bull. de l'Acad. de Méd., June 18, 1850, vol. xv, p. 860. Cholera and Accouchement, reciprocal Influence of. Devilliers (Dr. Jun). *Ibid.*, July 16, 1850, vol. xv, p. 967. Nervous Affections following. Burq (M. V.) Gaz. Méd., Feb. 2, 1850, vol. v, 3rd S., p. 82. Pathology of, especially with regard to Lungs. Walther, (Dr. A.) Arch. Gén. de Méd., Oct. 1850, vol. xxiv, 4th S., p. 162. Treatment of, by the Method of Priessnitz. Wertheim (Dr.) Bull. Gén. de Thér., 1850, vol. xxxix, p. 439. Exanthemata connected with. Thore (Dr., Jun.) Gaz. Méd., June 29, 1850, vol. v, 3rd S., p. 484.

Chorda Tympani, Electro-Physiological and Pathological Researches on. Duchenne (Dr.) Arch. Gén. de Méd., Dec. 1850, vol. xxiv, 4th S., p. 385.

Chorea, Sulphate of Strychnine in. Trousseau and Lacaze du Thiers (MM.) Union Méd., Feb. 14 and 19, 1850, vol. iv, pp. 78 and 86. Treatment of, by Friction with Chloroform. Gassier (Dr. L.) Bull. Gén. de Thér., 1850, vol. xxxix, p. 174.

Cod-Liver Oil, Pharmacological Remarks on. Dorvault (M.) Bull. Gén. de Thér., 1850, vol. xxxix, p. 360. In certain Chronic Affections. Escallier (Dr.) Union Méd., Jan. 19 and 22, 1850, vol. iv, pp. 33 & 38.

Colic, Nervous, Alum in. Philipeaux (M. E. R.) Bull. Gén. de Thér., 1850, vol. xxxix, p. 485.

Collodion, Occlusion of Eyelids by. Hairion (Dr. F.) Ann. d'Ocul. July, Aug. and Sept. 1850, vol. vi, 4th S., p. 124. For producing artificial Ectropeon. Cunier (Dr. F.) *Ibid.*, Oct. 1850, p. 186.

Constipation from Abuse of Purgatives. Guéneau de Mussy (Dr. N.) and Aran (Dr. F. A.) Union Méd., Feb. 16 and 19, 1850, vol. iv, pp. 82, 85.

Convulsions, Puerperal; in what Cases ought Delivery to be hastened? Pingault (M.) Union Méd., Sept. 7 and 14, 1850, vol. iv, pp. 437 and 448. In Connexion with Renal Disease; Case. *Ibid.*, August 29, 1850, vol. iv, p. 421. Blot (Dr. H.) *Ibid.*, Oct. 10, p. 493. Abs. in Lond. Journ. of Med., Nov. 1850, vol. ii, p. 1082.

———— in Children, Clinical Researches on. Ozanam. Arch. Gén. de Méd., March 1850, vol. xxii, 4th S., p. 257; May and June, vol. xxiii, pp. 5 and 163.

Copper, Workmen in. Chevallier and Boys de Loury (MM.) Ann. d'Hyg. Pub., April 1850, vol. xliii, p. 337; July 1850, vol. xliv, p. 27.

Cornea, Ramollissement of, in Consumptive Diseases. Hubsch (Dr.) Ann. d'Ocul., Jan. and Feb. 1850, vol. v, 4th S., p. 101. Cauterisation of, Abuse of. Deval (M. Charles). Union Méd., May 16, 1850, vol. iv, p. 238.

Coryza, abortive Treatment of, by Vapour of Acetic Acid. Saint-Martin (Dr.) Bull. Gén. de Thér., 1850, vol. xxxviii, p. 409.

Cough; its Treatment. Gendrin (M.) Gaz. des Hôp., March 23, 1850, vol. ii, 3rd S., p. 143.

Craniomalacia in Children. Lasègue (Dr.) Arch. Gén. de Méd., Feb. 1850, vol. xxii, 4th S., p. 187.

Cretinism, Examination of the Report of Sardinian Commission on. Brierre de Boismont (M. A.) Ann. Méd. Psych., April 1850, vol. ii, p. 205; July, p. 393. Boudin (M.) Arch. Gén. de Méd., Sept. 1850, vol. xxiv, 4th S., p. 65.

Croup, Tracheotomy in, three successful Cases of. Dépéret-Muret (Dr.) and Boulland (Dr. C.) Union Méd., August 3 and 6, 1850, vol. iv, pp. 377 and 381.

Crystalline Lens, traumatic Dislocation of. Rivaud-Landreau (M.) Ann. d'Ocul., July, Aug. and Sept., 1850, vol. vi, 4th S., p. 72. Subconjunctival Dislocation of. Barbier (Dr.) *Ibid.*, p. 83.

Curare, Researches on. Bernard and Pelouze (MM.) Union Méd., Oct. 17, 1850, vol. iv, p. 505.

Cystitis, Chronic; Case. Mordret (M.) Bull. de l'Acad. de Méd., Aug. 13, 1850, vol. xv, p. 1052.

Death, Apparent, in New-born Children. Cazeaux (M.) Gaz. Méd., April 27, 1850, vol. v, 3rd S., p. 316.

Delivery, Researches on, with regard to Rupture of the Membranes. Devilliers (Dr., Jun.) Bull. de l'Acad. de Méd., July 2, 1850, vol. xv, p. 929. At the Homes of the Women, necessity of, shewn by the Physiological and Pathological Conditions of New-born Children. Loir (Dr.) and Royer Collard (M.) *Ibid.*, April 2, 1850, vol. xv, p. 554.

Dentifrices, Liquid, superior to Solid. Foy (M. F.) Bull. Gén. de Thér., 1850, vol. xxxviii, p. 221.

Deodorizing Processes. Gaultier de Claubry (M.) Ann. d'Hyg. Pub., Jan. 1850, vol. xliii, p. 77.

Diabetes Mellitus. Bouchardat (M.) Bull. de l'Acad. de Méd., March 26, 1850, vol. xv, p. 538. Rayer (M.) Union Méd., April 11, 1850, vol. iv, pp. 177 and 181. Successfully treated by hydrotherapy. Brachet (M.) Gaz. des Hôp., Oct. 19, 1850, vol. ii, 3rd S., p. 494.

Digitaline. Homolle and Quevenne (MM.) Bull. de l'Acad. de Méd., Jan. 8, 1850, vol. xv, p. 332.

Digiti Semi-mortui, note on. Gillet de Grandmont (M.) Gaz. Méd., May 25, 1850, vol. v, 3rd S., p. 400. Abs. in Lond. Journ. of Med., July 1850, vol. ii, p. 698.

Diphtheritis, Observations on, deduced from an Epidemic observed at the Necker Hospital in 1848. Empis (M. G. S.) Arch. Gén. de Méd., Feb. and March 1850, vol. xxii, 3rd S., pp. 129 and 281.

Disarticulation of Hip-joint, successful case of. Henot (Dr.) Bull. de l'Acad. de Méd., July 30, 1850, vol. xv., p. 1004.

Dislocation of Pieces of Sternum on each other. Chevance (M.) Union Méd., Jan. 3, 1850, vol. iv, p. 6. Of Thigh and Arm, best means of Reducing. Lebert (Dr.) Bull. Gén. de Thér., 1850, vol. xxxviii, p. 177. Complete of Astralagus. Chabanon (Dr.) Gaz. des Hôp., Jan. 3, 1850, vol. ii, 3rd S., p. 5.

Doctrine of Morbid Elements applied to Therapeutics. Forget (M.) Bull. Gén. de Thér., 1850, vol. xxxviii, p. 11.

Drowning or Asphyxia, aid to be given in. Guérard (M. A.) Ann. d'Hyg. Pub., Oct. 1850, vol. xliv, p. 271.

Dysentery, Epidemic at Mortagne; its relation to Cholera. Hullin (Dr. P.) Bull. de l'Acad. de Méd., July 2, 1850, vol. xv, p. 923.

Dyspepsia, Observations on. Chomel (M.) Union Méd., March 7 and 9, and April 2, 1850, vol. iv, pp. 117, 122 and 162.

Elephantiasis, Examination of Hand and Arm of a patient affected with. Rayer and Davaine (MM.) Gaz. Méd., Aug. 31, 1850, vol. v, 2rd S., p. 636.

Ennui, or Tædium Vitæ. Brierre de Boismont (M. A.) Ann. Méd.-Psych., Oct. 1850, vol. ii, p. 545.

Epidemics of the Middle Ages (600 to 1300). De Merssemann (M.) Gaz. Méd., Feb. 16, 1850, vol. v., 3rd S., p. 123.

Epispastics, Lecture on. Gendrin (M.) Gaz. des Hôp., Oct. 3, 1850, vol. ii, 3rd S., p. 465.

Erection, Physiological Examination of the Mechanism of. Debrou (M. E.) Gaz. Méd., Sept. 28 and Oct. 5, 1850, vol. v, 3rd S., pp. 698 and 729.

Ergot of Rye, Influence of on Life of Child and Health of Mother. Danyau (M.) Bull. de l'Acad. de Méd., Oct. 1, 1850, vol. xvi, p. 6 ; also Bull. Gén. de Thér., 1850, vol. xxxix, p. 304.

Ether, Hydriodic, Physiological properties of. Huette (Dr. C.) Gaz. Méd., July 27, 1850, vol. v, 3rd S., p. 568. Abs. in Lond. Journ. of Med., Nov. 1850, vol. ii, p. 1086. Preparation of. Stanislas Martin (M.) Bull. Gén. de Ther., 1850, vol. xxxix, p. 173.

Eyes, and their Appendages, Congenital Malformations of. Cornaz (M. E.) Ann. d'Ocul., Jan. and Feb. 1850, vol. v, 4th S., p. 24. Effusions of Blood in. Tavignot (M.) Gaz. des Hôp., July 9 and 16, 1850, vol. ii, 3rd S., pp. 322 and 334. Cancer of ; Extirpation ; Microscopic examination. Boens (M.) Ann. d'Ocul., July, Aug. and Sept. 1850, vol. vi, 4th S., p. 39. Extract of Cannabis Indica in Diseases of. Binard (M. F.) *Ibid.*, Jan. and Feb. 1850, vol. v, 4th S., p. 99.

Fever, Eruptive, Epidemic of in Brussels. Mareska (M.) Gaz. Méd., Oct. 26, 1850, vol. v, 3rd S., p. 781.

——— Intermittent, Practical Observations on. Nonat (M.) Gaz. des Hôp., March 28 and April 16, 1850, vol. ii, 3rd S., p. 149 and 181. In Africa. Dutroulau (M.) Gaz. Méd., Nov. 2, 1850, vol. v, 3rd S., p. 792. In New-born Children. Guiet (Dr.) *Ibid.*, July 27, 1850, vol. v., 3rd S. p. 564. Common (sea) salt in. Piorry (M.) Bull. de l'Acad. de Méd., Sept. 17, 1850, vol. xv., p. 1122. Comparative value of Arsenic and Quinine in. Maillot (Dr.) *Ibid.*, Sept. 17, 1850, vol. xv, p. 1123. Arsenic in. Mazière (Dr P.) Bull. Gén. de Thér., 1850, vol. xxxviii, p. 36. Vaulpré (Dr.) *Ibid.*, 1850, vol. xxxix, p. 265. Jacquot (M. F.) Gaz. Med., Oct. 12 and Dec. 14, 1850, vol. v, 3rd S., pp. 757 and 885. Treatment by application of Cupping-glasses during the attack. Gondret (Dr.) Bull. de l'Acad. de Méd., May 7, 1850, vol. xv, p. 688.

——— Typhoid, Example of Contagion of. Bouillod (Dr.) Bull. Gén. de Thér., 1850, vol. xxxix, p. 407. Treatment of. *Ibid.*, 1850, vol. xxxix, pp. 246 and 345. Treatment of, by Black Sulphuret of Mercury, and Friction with Mercurial Ointment. Becquerel (M.) Gaz. Méd., Sept. 14, 1850, vol. v, 3rd S., p. 672. Ice to Abdomen and Head in. Bull. Gén. de Thér., 1850, vol. xxxix, p. 35.

——— Typhus, in Silesia. Lasègue (Dr. C.) Arch. Gén. de Méd., July 1850, vol. xxiii, 4th S., p. 301.

Fingers, Separation of Congenital Union of. Didot (Dr. A.) Union Méd., June 18, 1850, vol. iv, p. 295. Nodosities of Flexor Tendons of. Notta (Dr. A.) Arch. Gén. de Méd., Oct. 1850, vol. xxiv, 4th S., p. 142.

Fistula, Vesico-vaginal, Plastic Operation for ; with Cases and Remarks. Jobert de Lamballe (M.) Gaz. des Hôp., March 21, 1850, vol. ii, 3rd S., p. 137 ; also Union Méd., March 28, April 9, May 9, 11, and 14, 1850, vol. iv, pp. 154, 174, 225, 230, and 234. Vesico-uterine and Vesico-utero-vaginal, Curability of. Jobert de Lamballe (M.) Union Méd., Nov. 26, 28, 30, Dec. 3, 1850, vol. iv, pp. 572, 575, 579, and 584. Recto-vaginal ; Cure. Jobert de Lamballe (M.) *Ibid.*, July 18, 1850, vol. iv, p. 349.

Fœtus in Utero, Influence of Bleeding on Development of ; Utility of this Process in certain cases of Narrow Pelvis. Depaul (Dr.) Union Méd., Jan. 12, 1850, vol. iv, p. 22.

Forceps and Cephalotribe, Observations on Application of above Upper Inlet of Pelvis. Chailly-Honoré (M.) Bull. Gén. de Thér., 1850, vol. xxxix, p. 493.

Foreign Bodies in Œsophagus, Indications for Treatment of. Bull. Gén. de Thér., 1850, vol. xxxix, p. 115.

Fracture of Petrous Portion of Temporal Bone. Dronsart (M.) Bull. de l'Acad. de Méd., July 16, 1850, vol. xv, p. 974. Of Inferior Maxilla, Treatment of. Suzeau (Dr. E.) Bull. Gén. de Thér., 1850, vol. xxxviii, p. 70. Longitudinal, of Long Bones. Bouisson (M.) Union Méd., Sept. 19, 21, 24, and 26, 1850, vol. iv, pp. 457, 461, 465, and 469. Of Lower End of the Radius, Treatment of: Method of Professor Bonnet. Philipeaux (M. E. R.) Bull. Gén. de Thér., 1850, vol. xxxviii, p. 207. Of Border of Acetabulum. Bardinet (Dr.) Union Méd., May 25 and 28, 1850, vol. iv, pp. 253 and 258. Of Neck and Body of Femur, New Method of Treating. Martin (M. F.) *Ibid.*, Dec. 14, 17, and 19, 1850, vol. iv, pp. 604, 608, and 611. Of Leg, Apparatus for Treatment of. Gaillard (M. L.) Gaz. Méd., April 6, 1850, vol. v, 3rd S., p. 260. Longitudinal, of Lower Part of Tibia. Célérier (Dr. L.) Union Méd., Oct. 22, 1850, vol. iv, p. 514.

French Army in Africa, Diseases of. Maillot (M.) Gaz. Méd., Jan. 5, 1850, vol. v, 3rd S., p. 2.

Galvanism, Local. Duchenne (Dr.) Arch. Gén. de Méd., July and August 1850, vol. xxiii, 4th S., pp. 257 and 420. In Treatment of Various Diseases. Duchenne (Dr.) Union Méd., March 26, 1850, vol. iv, p. 150.

Gamboge in Large Doses. Abeille (M.) Gaz. des Hôp., March 2 and July 9, 1850, vol. ii, 3rd S., pp. 107 and 321.

Gelatine as an Aliment. Chevallier, Gibert, and Bérard (MM.) Bull. de l'Acad. de Méd., Jan. 22, 1850, vol. xv, p. 367.

Glottis, Œdema of, treated by Scarification. Valleix (M.) Bull. Gén. de Thér, 1850, vol. xxxix, p. 15.

Glycerine, Preparation of. Bull. Gén. de Thér., 1850, vol. xxxviii, p. 219.

Gold, Chemical and Pharmaceutical View of Preparations of. Legrand (Dr. A.) Gaz. Méd., Nov. 9 and 16, 1850, vol. v, 3rd S., pp. 809 and 822. Pharmacological Observations on Preparations of. Bull. Gén. de Thér., 1850, vol. xxxix, p. 450.

Gutta-Percha, Surgical Instruments made of. Cabirol (M.) Bull. de l'Acad. de Méd., July 30, 1850, vol. xv, p. 994.

Hæmometers, Memoir on. Guettet (M.) Gaz. des Hôp., Feb. 23, 1850, vol. ii, 3rd S., p. 95.

Hæmorrhage, Consecutive Arterial, Treatment of. Nélaton (M.) Bull. de l'Acad. de Méd., July 9, 1850, vol. xv, p. 961. Cerebral, Cl. Lect. on. Rostan (M.) Gaz. des Hôp., July 31, Aug. 6 and 20, Sept. 3, 14, and 19, 1850, vol. ii, 3rd S., pp. 361, 371, 389, 413, 434, 441. After Delivery, Observations on. *Ibid.*, April 23 and 25, 1850, vol. ii, 3rd S., pp. 193 and 197.

Hæmorrhoidal Affections, Contraction of Sphincter Ani in. Le Pelletier (M. L.) Union Méd., May 18 and 21, 1850, vol. iv, pp. 242 and 247.

Hare-Lip, Modification of Operation for. Philippeaux (M. E. R.) Bull. Gén. de Thér., 1850, vol. xxxix, p. 392.

Heart, and Aorta, Development of, during the first 144 Hours of Incubation. Prévost and Lebert (Drs.) Gaz. Méd., Nov. 23, 1850, vol. v, 3rd S., p. 834. Ectopia of, with Eventration of most Organs. Follin (Dr.) Bull. de l'Acad. de Méd., Aug. 20, 1850, vol. xv, p. 1073. Palpation in Diseases of. Gubler (Dr. A.) Union Méd., Oct. 19, 1850, vol. iv, p. 509. Sounds of, Alteration of by Pleural Diseases, and Production of Abnormal Sounds in the Pleural Cavity by the Movements of the Heart. Barth (M.) *Ibid.*, Jan. 1, 1850, vol. iv, p. 1. Valvular Endocarditis, Lect. on. Gendrin (M.) Gaz. des Hôp., July 18 and 25, 1850, vol. ii, 3rd S., pp. 337 and 349.

Hemiplegia of Right Side; Sensation entire; Tubercles in Right Lobe of Cerebellum. Tailhé (M.) Gaz. Méd., April 20, 1850, vol. 5, 3rd S., p. 304.

Hepatic Vein, Inflammation of, after acute Abscess of Liver. Tholozan (Dr.) Gaz. des Hôp., June 25, 1850, vol. ii, 3rd S., p. 297.
Hermaphrodism of Internal Organs in a Sheep. Raciborski (M.) Bull. de l'Acad. de Méd., July 9, 1850, vol. xv, p. 963.
Hernia, Strangulated, followed by Abscess and Expulsion of a Lumbricus. Yvonneau (Dr.) Union Méd., Feb. 14, 1850, vol. iv, p. 79. Inguinal, of Colon on Right Side. Lesauvage (Dr.) Bull. de l'Acad. de Méd., Oct. 1, 1850, vol. xvi, p. 30. Strangulated, treated by Chloroform. Gorlier (M. J.) Union Méd., Feb. 7, 1850, vol. iv, p. 67. New Process for Radical Cure of. Valette (M.) Gaz. des Hôp., Sept. 3, 1850, vol. ii, 3rd S., p. 414.
Hydrocele, New Operation for. D'Avat (M.) Gaz. Méd., Feb. 9 and 16, 1850, vol. v, 3rd S., pp. 104 and 129. Baudens (M.) *Ibid.*, Dec. 21 and 28, 1850, vol. v, 3rd S., pp. 901 and 919.

Identity, Influence of Occupations on Question of. Tardieu (M. A.) Ann. d'Hyg. Pub., Jan. 1850, vol. xliii, p. 131.
Infanticide, Case of Suspected. Orfila (M.) Ann. d'Hyg. Pub., April 1850, vol. xliii, p. 374.
Inflammation, Nature of. Marchal de Calvi (M.) Gaz. des Hôp., June 18, 1850, vol. ii, 3rd S., p. 285.
Insane, new Apparatus for feeding. Belhomme (M.) Bull. de l'Acad. de Méd., April 23, 1850, vol. xv, p. 645.
Insanity, Symptomatology of. Parchappe (M. Max.) Ann. Méd.-Psych., Jan. 1850, vol. ii, p. 1 ; Feb., p. 232. Following Acute Diseases. Thore (Dr., Jun.) *Ibid.*, Oct. 1850, vol. ii, p. 586.
Intestine, Piece of, expelled from Anus, with Diverticula. Valleix (M.) Union Méd., Feb. 2, 1850, vol. iv, p. 57. Marage (Dr.) *Ibid.*, July 18, p. 351.
Iodide of Iron, Preparation of Pills of. Gille and Blancard (MM.) Bull. de l'Acad. de Méd., Aug. 13, 1850, vol. xv, p. 1045. Lecanu (M.) Bull. Gén. de Thér., 1850, vol. xxxix, p. 171.
——— of Potassium, Biscuits and Pills of. Stanislas Martin (M.) *Ibid.*, 1850, vol. xxxix, p. 22.
Iodine, a Chemical, Pharmaceutical, and Medical Monograph on the Preparations of. Dorvault (M.) Gaz. Méd., Jan. 2, March 9, 16, 23, April 6 and 21, 1850, vol. v, 3rd S., pp. 9, 178, 199, 222, 263, 321. (The former portions of this memoir were published in the *Gazette Médicale* for Nov. 17 and 24, December 8, 15, and 29, 1849.) Injections of, in Congestive Abscesses. Fleury (Dr.) Gaz. Méd., Oct. 5, 1850, vol. v, 3rd S., p. 732. Boinet (M.) *Ibid.*, Oct. 12 and Nov. 2, pp. 748 and 795.
Iritis as Symptomatic of the Presence of a Foreign Body in the Eye. Desmarres (Dr.) Ann. d'Ocul., Jan. and Feb. 1850, vol. v, 4th S., p. 3.
Iron, Potassio-tartrate of, Chemical and Therapeutical Observations on. Mialhe (M.) Bull. Gén. de Thér., 1850, vol. xxxviii, p. 529. Preparation of Black Oxide of. Bull. Gén. de Thér., 1850, vol. xxxviii, p. 68. Preparations of, Discussion on in Belgian Acad. of Med. Martens (M.) Gaz. Méd., Nov. 30, 1850, vol. v, 3rd S., p. 862. Sulphate of: is it a poison? Chevallier (M. A.) Ann. d'Hyg. Pub., Jan. 1850, vol. xliii, p. 180. Case of Suspected Poisoning by. *Ibid.*, 1850, vol. xliii, p. 417.
Itch, New Method of Treatment of. Bazin (Dr.) Union Méd., July 9 and Nov. 9, 1850, vol. iv, pp. 333 and 543.

Joints, Iodine Injection in Effusion into. Velpeau (M.) Gaz. des Hôp., May 16, 1850, vol. ii, 3rd S., p. 229.

CRITICAL DIGEST OF THE BRITISH AND FOREIGN MEDICAL JOURNALS.

PRACTICE OF MEDICINE AND PATHOLOGY.

CASE OF HYDROPHOBIA.

Dr. P. Redfern, of Aberdeen, relates in the *Edinburgh Monthly Journal* for February 1851, a case of hydrophobia, occurring twenty-eight days after the bite of a rabid dog, and terminating in death on the fifth day after the commencement of the symptoms. The patient was a child, two years of age. The post-mortem appearances, conjoined with the most careful microscopical examination, especially of the eighth pair of nerves, failed to detect any structural lesion. But it is not improbable that no structural lesion whatever exists in this and in many other nervous diseases; for it is already shown, that a peculiar force is manifested in animals in the physiological actions of the nervous and muscular systems, and that, though this force resembles electricity, yet it is perfectly distinct from it. It then appears very possible, that an increased or perverted action of such a force, upon the tissues of an animal body, may give rise to the whole phenomena of alarming and destructive diseases, and yet leave their structure without a single evidence of material change.

ACUTE RHEUMATISM, WITH DROPSY OF THE PERICARDIUM, IN A CHILD THREE YEARS OLD.

This case appeared, from the symptoms and post-mortem examination, to have been one of simple dropsy of the pericardium, produced by metastasis from the right lower extremity. Authorities speak of both the remarkable points distinguishing this case, viz., acute rheumatism at so early an age, and passive pericardial effusion without inflammation, as extremely rare. The writer (Mr. W. E. Cooksey) inquires if similar cases have been met with. [*Prov. Med. and Surg. Journ.*, Feb. 5, 1851.]

TREATMENT OF APHONIA BY STIMULANT INHALATION.

In the *Transactions of the American Med. Assoc.*, vol. iii. 1850, p. 135, Dr. Pancoast writes to the following effect.

The form of aphonia, here alluded to, is that following an ordinary cold, without leaving any perceptible organic lesion in the pulmonary apparatus. The voice is reduced to a faint hoarse whisper, distinguishable only at the distance of a few feet; and a continued attempt to talk, though it gives no pain, becomes quickly attended with a feeling of fatigue, as though there were some obstruction to the passage of air through the larynx. In breathing merely, there is little or no difficulty; as the individuals are capable of undergoing considerable exertion without any unusual signs of fatigue. Having had an opportunity, several years ago, of observing the movements of the vocal chords in a person who had attempted suicide, and was left with a cicatrised wound opening into the ventricles of the larynx, Dr. Pancoast watched with great interest the play of these vocal chords, which were fully exposed to view, and was astonished at their frequent, varied, and extensive movements. From the evidence he obtained with regard to their motion, he was led to infer that this form of aphonia arose from a partial paralysis of the intrinsic muscles of the larynx, to be cured by stimulating them to action. His first case occurred eight years ago. The patient was a healthy young country girl; the aphonia had lasted for six months, resisting all treatment. She was made to inhale chlorine, gradually liberated from

chloride of soda or lime, by very dilute hydrochloric acid, in a common glass retort. The inhalation was continued for some minutes, and repeated two or three times a day, according to the degree of irritation produced in the throat and larynx. From the first trial, the patient's voice improved, and in three days had become nearly as strong as ever. Two months after her return to the country, another cold was followed by an attack of aphonia, which also yielded to a few inhalations of chlorine vapour. Dr. P. has since treated a case in a medical practitioner, who had tried, among other remedies, repeated applications of strong solution of lunar caustic, without any good effects. The voice was restored to its natural strength in a week or ten days. He suggests that care should be taken that the chlorine be not developed too rapidly. He believes that it acts merely as a local stimulant, and that iodine, or any other exciting vapour, would produce similar results.

TREATMENT OF SCARLATINAL OTORRHŒA.

In the treatment of the otorrhœa, which sometimes follows scarlatina, M. Trousseau employs, instead of simple alkaline or emollient applications, the same topical remedies as would be used in the most severe affections of the mucous membrane or skin—mercurials or the nitrate of silver. He recommends a liniment, consisting of binoxide of mercury, twenty-five parts, oil of sweet almonds and lard, of each five parts. The external meatus is washed out and well dried, and a brush dipped in the liniment is introduced twice a day. By this means, M. Trousseau lately cured a case of scarlatinal otorrhœa, in a little girl, which would otherwise probably have destroyed the small bones of the ear, and produced caries of the petrous portion of the temporal bone. M. Trousseau also recommends the application of a solution of nitrate of silver, in addition to the mercurial liniment; it gives no pain, and may be safely intrusted to the parents of the child. A little binoxide of mercury may also be mixed with oil, and dropped into the ear, which is then to be plugged with cotton wool. As long as there is no perforation of the membrana tympani, these remedies are excellent; they are applicable not only to children, but to adults labouring under otorrhœa, or under that form of eczema which renders the meatus dry, and produces some deafness. This is easily remedied by the preparations described above, if care be taken to keep the tissues moist in the intervals with olive oil. [*Journal de Méd. et de Chir. Pratiques*, Oct. 1850.]

TUMOUR OF THE OPTIC THALAMUS INCLOSING A CALCAREOUS CONCRETION: ABSENCE OF MARKED CEREBRAL SYMPTOMS.

A servant, a young woman, unmarried, died quite suddenly, after a short struggle, having only complained of some confused pain in her head the day before. She had not exhibited any well marked symptoms of cerebral disease. The place of the right optic thalamus was occupied by a tumour, the size of a walnut, encased in a thin lamina of healthy nervous substance, apparently the remains of the thalamus. It projected considerably into the ventricle, and inclosed a calcareous concretion the size of a filbert, of irregular figure. The tissue of the tumour was distinguished from nervous substance, by its greater consistence, and its yellowish pellucid colour; the fresh section had a striated and gelatinous appearance; small earthy particles were disseminated throughout its substance. The tumour, and its enveloping brain substance, became quite detached by maceration in spirit. The ventricles were dilated by limpid serum, and three ounces of limpid serum lay in the subarachnoid space. The veins and sinuses contained less blood than natural. The other organs were healthy; the uterus was gravid.

The tumour seemed, under the microscope, to consist of small cells and granular matter, with a sparing intermixture of fibrous element. [Mr. Bindley in *Ninth Report of Birmingham Pathological Society*, p. 6.]

DR. ZOEHRER'S EXPERIMENTS ON RETRO-VACCINATION IN VIENNA.

The following account of some experiments on retro-vaccination, performed by Dr. Zoehrer of Vienna, is extracted from the reports of the General Hospital at Vienna for 1848 and 1849, published in the *Zeitschrift der K. K. Gesellschaft der Aerzte zu Wien*, for November 1849, and Sept. and Oct. 1850.

Since the year 1842, Dr. Zöhrer has been performing experiments on the transmission of vaccinia from the child to the cow. The results have not been altogether satisfactory, from the cows being neglected by the persons who had the care of them; but, with the friendly assistance of Herr Kotmeier, the bailiff at Gersthof near Vienna, he met with better success in 1848 and 1849.

Experiments. 1. A white milch-cow with brown spots, and fine-skinned, which had calved for the first time three months before, and had the udder and teats well formed, was selected from a herd of thirty. Two deep punctures were made on each nipple on the 9th April, and matter was introduced, which had been transmitted through the human subject since the time of Jenner. Up to the 14th, there was no change, beyond a knotty hardness and increased heat.

The second experiment was made on a dark-brown, thick-hided, pregnant cow, seven years old. The matter, derived from spontaneous cow-pock in 1843, was introduced into the udder.

In the meantime, from the 14th to 16th April, vaccine points were developed in the first cow. Seven of the efflorescences remained hard, with a broad base, and firm exudation in the cellular tissue. When punctured, they gave exit to a scanty tenacious fluid, coloured with blood. The eighth spot, near the end of the right hinder nipple, exhibited on the eighth day a dark, small, translucent ring, with a well-raised margin and deep central depression, and furnished on puncture some perfectly clear lymph. With this a male child, Rudolf, four months old, was vaccinated, by means of four deep punctures. Up to the 20th of the month the punctures presented small indurations, which on the third day exhibited vesicles filled with clear contents, had a small hard dark-red apex, with considerable exudation in the surrounding cellular tissue. On the 26th, desquamation commenced; it was accompanied by obvious febrile symptoms, and was finished at the beginning of May.

In the meantime, crusts had formed on all the pustules in the cow; they left well marked cicatrices. In the second cow, the pocks were not well developed, and what little matter there was, was lost, through the carelessness of those who had the care of the animal.

On the 27th April, a female child, Rosa, 19 months old, sister of the above mentioned boy, was vaccinated with matter taken from his arm. The results were as follows. *First day.* Redness of the punctured spot. *Second day.* No further change. *Third day.* Palpable hardness. *Fifth day.* Formation of small vesicles. *Sixth day.* Enlargement of these, with raising of their edges. *Seventh day.* General febrile disturbance. *Tenth day.* Diarrhœa; excrements fœtid, yellow, thick, at a later period fluid. *Twelfth day.* Tongue loaded; child restless, hot, and sleepless. *Thirteenth day.* Commencement of desquamation. The child was more quiet, and took food, which it had previously refused. *Seventeenth day.* The pocks were covered with small, dark, very firm and thick crusts, which gradually fell off, and left deep cicatrices, of a strong red colour.

At the same time with this case, a female child, T. F., 11 months old, was vaccinated. The results were similar to those which have been just related; and were moreover accompanied by extensive vaccine roseola. From the child T. F. were vaccinated two foundlings, of six weeks old, and one of a fortnight old. In two of the cases six, in one five vaccine efflorescences

appeared; they had a slow course, contained bluish transparent matter, and were accompanied by febrile disturbance; the crusts were hard and darkish, and left deep cicatrices.

On June 16, 1849, Dr. Zöhrer inoculated a cow with vaccine matter transmitted from a retro-vaccination performed in 1842. The animal was three years old, thick skinned, and small, with loose pendulous udders and teats: it had calved three months before. The lymph was inserted into a deep puncture in each nipple. On June 19th, the spots appeared faded, so that there seemed to be little hope of success. On June 21st all the punctures, on both sides, were surrounded with an areola eight lines broad. On June 22nd, there was a pustule developed on the hinder left nipple. The border was very hard, the areola narrow and dark red, and very tender to the touch. The temperature of the udder was raised, and the place where the pustule was felt knotty. On puncturing the pustule, a small quantity of clear lymph exuded, with which, within an hour, Dr. Zöhrer vaccinated a child, F. A., in the Foundling Hospital.

This was on the 22nd of June. On June 25th, the punctures were reddened. On June 26, the punctures had faded, except two. June 27, the indurations had increased. June 28, vesicles appeared, filled with lymph. June 29, the vesicles had extended, and were surrounded with a red areola. Two children were now vaccinated with lymph taken from this case. July 3, the pustules had extended, and still contained fluid lymph. The process ended in the formation of a thick dark crust.

In the cow, no result was obtained from the anterior nipples. The pustule on the hinder right nipple was extensive, hard, and deeply seated in the corium. On June 23 Dr. Zöhrer punctured it, and with the lymph (which was rather opaque and scanty) he vaccinated a child four weeks old, without effect. Both the pocks in the cow passed through their course pretty rapidly, so that desiccation commenced on the eighth day, and on the twelfth day hard dark crusts were present.

Second Descent. From the child F. A., three others were vaccinated. 1. M. J., six weeks old. Six punctures were made; of these five presented hard, small, strongly glistening pustules. The course was slow. The vesicles remained hard, and contained clear lymph even after the twelfth day. 2. Sch. A., ten days old. The pustules were small and hard, and the course the same. The crusts were slow in forming; they were thick, and left deep round cicatrices. 3. M. M., eleven days old. The pustules were small and hard, of the size of linseeds. The course was slow: the pocks remained small until they dried. There were no febrile symptoms in either case; all three had some miliary eruption, but nothing very remarkable.

Third Descent. 1. E. G., was vaccinated. Six pustules appeared, which presented nothing remarkable in their course. 2. W. J., aged nineteen months; and his sister E., aged nine months. Dr. Zöhrer did not see the child till the twenty-third day, when there were tolerably compact dark brown crusts; the pustules appearing to have been in the mean time well developed. 3. St. E., fourteen months old; no result. 4. W. A., ten days old. Six pustules were formed, which passed through a normal course. With these, other children, B. A. and W. A., each twelve days old, were vaccinated; and the lymph was continued to be propagated through the human subject, with encouraging success.

SCHMIDT'S REMEDY FOR TAPE-WORM

The details are extracted from Most's *Encyklopädie der gesammten Medicinischen und Chirurgischen Praxis* (B. I., p. 992, 2nd edition). The composition of the remedy is also presented, though with less fulness, in the *Pharmacopée Universelle* of Jourdan (T. I., p. 313, 2nd edition).

By the process of Schmidt, the tape-worm is said to be expelled in from three to five days, without injury to the patient. A trial of it was made,

under the authority of government, in the Berlin hospital, when the results were found to be so favourable, that the king of Prussia purchased the secret by bestowing a pension of several hundred dollars upon the originator. The plan substantiates the purely empirical fact, that vermifuge medicines, when exhibited separately, are less efficacious than when combined in complex formulæ.

The patient commences by taking, in the morning, the following mixture: ℞ Pulv. rad. valer. min. ʒvi; fol. senn. ʒij; aq. ferv. ʒvi; infunde et cola. Adde sal. Glauber. crystal. ʒiij; syr. mannæ ℥ij; elaeosacch. tanaceti ʒij; M.S. Two tablespoonfuls every two hours, drinking freely at intervals of sweetened coffee. With this he perseveres till seven in the evening. At noon he takes a thin gruel; and in the afternoon one or two herrings, with the milt. At eight in the evening, the patient has a herring salad, with minced raw ham and oil, sweetened with sugar, plentifully added. Frequently portions of the tape-worm begin now to be discharged. At six in the ensuing morning, he commences the following pills every hour: ℞ Assafœtidæ, extr. graminis, āā ʒiij; gambog., pulv. rhei, jalap., āā ʒij; pulv. ipecac., digit. purp. sulph. antim. aurat., āā ℈ss; sub. muriat. hydr. ℈ij; ol. tanacet., æther. anisi, āā gt. xv. M. Divide into pills of two grains each, which are to be placed in a well-stoppered bottle; of these, six pills are to be administered every hour, with a teaspoonful of common syrup. Half an hour after the first dose, a tablespoonful of castor oil is also given. Sweetened coffee is again to be taken freely at intervals during the day. At two in the afternoon, the worm is usually wholly expelled, when the pills are to be discontinued. Should only separate portions be voided, the remedies are persisted with, and a second dose of castor oil becomes requisite. Meat soup is allowed at dinner, and in the evening. On the succeeding day, six pills are exhibited at three different times—morning, noon, and evening. Such is the entire and complicated process. Most adds, that this method of cure has been a hundred times successfully tested: and that it warns young physicians, not to condemn too hastily the complex prescriptions of older practitioners, as there is often produced a *tertium quid* of real efficacy, which could not have been developed in more simple compositions. We leave it to British practitioners to judge, whether this commendation ought to be sufficient to induce them to give a trial to the singular process—ham and herrings included. [Abridged from the *Monthly Journal of Med. Science*, March 1851.]

INPERFORATE ANUS: LIFE PROLONGED TO THE HUNDRED AND SECOND DAY WITHOUT EVACUATION.

In this case reported by Mr. A. Prichard in the *Provincial Medical and Surgical Journal* for March 5, 1851, a well-formed anus was disclosed on examination, and an operation proposed to remedy the obstruction in the natural passage, but not assented to by the mother. The case is peculiar, as showing the length of time which the infant lived without ever having an evacuation of the bowels, and having been scarcely at all sick. It never threw up anything like fæcal matter, but, as in other children, a little of the mother's milk now and then regurgitated. On examination after death, the organs generally were found healthy, but about the end of the jejunum the bowel began to be dilated, and all the lower part of the ilium was enormously distended—the contents being almost entirely gaseous. The large intestine was also much dilated. At the sigmoid flexure there was a slight contraction, so that the rectum itself appeared like a large and separate pouch, and this was full of yellow and fluid fæcal matter. The termination below was a rounded fibrous cord, as thick as a crow-quill, leading to the anus, and there was not more than a quarter of an inch between the lower part of the pouch, which has been described, and the highest point (about a quarter of an inch), to which a probe could be passed through the natural aperture below.

SPONTANEOUS FORMATION OF POISON IN THE HUMAN BODY.

In an article on the nature and treatment of diseases, published in the *Dublin Quarterly Journal* for February 1851, Dr. Graves relates some cases in proof of an opinion formerly advanced by him, that wounds and accidents, affecting external parts, may give rise to symptoms plainly denoting the operation on the constitution of a poison manufactured, as it were, in the injured skin and subcutaneous tissue.

Case I. A healthy female child scratched her nose with a blunt nail. The wound inflamed, and subsequently festered; and in several days the face, forehead, and at a later period the trunk, became more or less covered with an eruption somewhat resembling ecthyma. The child got well in a fortnight, under the local application of soothing remedies, and the internal use of lime-water with milk, which was given to obviate a looseness of the bowels which followed the appearance of the eruption. It is curious that the matter from the pustules infected three of her little nursery play-fellows. As soon as this fact was noticed, the children were separated from each other, and the nascent pustules were checked in their progress by applying a weak solution of nitrate of silver. They all recovered. The case is interesting, as proving not only that an injury may cause the human body to manufacture a poison capable of infecting the constitution of the individual, but that the matter so formed may be capable of infecting, by contact, other persons.

Case II. Miss G., aged 16, had fever; bed-sores formed on the sacrum and hips, and gave much trouble. Notwithstanding, there seemed to be some chances of her recovery, when, on the twenty-fifth day of her fever, during the nocturnal delirium, she bit off a large piece of her right thumb nail, and injured it to the quick. It inflamed rapidly, and the thumb swelled, the lymphatics of the right arm became indurated, and the whole extremity swollen. After a few days the body was covered with large vesicles, many of which were confluent, and contained an opaque whitish serum: there was also an increase of constitutional irritation and fever. She died on the thirty-second day. In this case it is doubtful whether the poison originated in the bed-sores, or in the injured thumb.

Case III. In the spring of 1848, Dr. Graves saw a young lady labouring under typhus fever, and who, after a long struggle, was apparently about to undergo a favourable crisis, when suddenly the skin of her scalp, which had been blistered previously, and had healed but imperfectly, became erysipelatous. The disease spread slowly at first to the forehead and eyelids, in which matter formed abundantly, and was after some days let out with a lancet. The erysipelas now extended to the neck and between the shoulders, assuming daily a more unfavourable character, and producing, as it spread, much subcutaneous œdema attended with the formation of sero-purulent matter, as is usual in cases of diffuse inflammation. Her state became rapidly worse; vesicles containing sero-purulent matter formed in her skin, and at last many of her joints, both large and small, became the seat of puriform deposit shortly before death.

Dr. Graves thinks that he has been able to trace many of the symptoms, observed in *rupia cachectica*, and in the worst forms of secondary lues and pseudo-syphilis, to the operation of a poison formed in irritated ulcers, whether in the throat or other parts. Hitherto pathologists have considered these constitutional effects to be the result of a poison introduced into the system from without.

SURGERY.

ABSCESS IN THE NECK FOLLOWING SCARLATINA: RUPTURE OF THE INTERNAL JUGULAR VEIN: RECOVERY.

Dr. R. J. Hale related in this Journal for August 1850, a fatal case of ulceration and rupture of the internal jugular vein, following scarlatina. The following case, of which we abridge the account given in the *Union Médical* for August 24, 1850, is reported by Drs. Dépéret-Muret and C. Boulland of Limoges.

Case. Dr. Dépéret was called, on the 13th February 1850, to see a boy, aged 14, who had had scarlatina for eight days. The only treatment employed had been five leeches to the angle of the lower jaw, on account of intense angina with swelling of the parotid region. The patient, when seen, was suffering from violent inflammation of the pharynx with great tumefaction of the tonsils; and the air passages were filled with mucus, the result of universal bronchitis. A dose of tartar emetic produced abundant vomiting; and this was followed by the ejection of a quantity of pus. On the next day, the voice and breathing were free; there was a little fever; desquamation was proceeding freely.

There was a tumour in the left parotid region, extending from above downwards, from the lobe of the ear to the middle of the neck; in front it reached the anterior third of the lower jaw, and posteriorly it became buried under the sterno-mastoid muscle. It was hard, resistant, tender when touched, and immoveable; it seemed to be deeply buried in the tissues. Fifteen leeches were applied round it, to be repeated the next day; and poultices of flour and linseed-meal were ordered to be constantly worn.

February 18. The general health of the patient was satisfactory. The tumour projected more, and was soft and fluctuating. No abnormal sound was heard on auscultation. A bistoury was introduced at its summit, to the depth of about a quarter of an inch, and gave exit to some thick, creamy, inodorous pus, without any blood. It was recommended to allow the pus to escape gradually; and poultices and emollient lotions were prescribed.

February 21. Up to this date nothing had escaped but healthy pus. On this day, the person who dressed the part, observing a fleshy flocculent plug in the mouth of the wound, attempted to remove it by traction. A large quantity of dark blood immediately escaped; this was immediately arrested by pressure on the orifice of the abscess.

February 22. The whole sac was easily recognised to be full of soft semi-coagulated blood. Venous hæmorrhage had evidently taken place; but it did not proceed from the external jugular vein, which was well defined to the outside of the opening of the abscess. A compress was applied, and kept wet with cold vinegar and water; and the patient was desired to keep quiet, and to resist as much as possible all efforts to cough.

February 23. The swelling was much increased in size; the skin was much inflamed and thinned. No murmur nor expansive movement could be perceived in the tumour: the beating of the carotid artery could be heard distinctly, and the pulse could be felt in the facial and temporal arteries. It was determined to extend the original opening, which Dr. Boulland did to the extent of about three centimètres (1·17 inch). A quantity of half coagulated dark blood immediately escaped. Without loss of time Dr. Boulland plugged the aperture with his finger. He then cut, with scissors, the external wall of the tumour, from below upwards. The blood immediately escaped in great quantity; the patient was nearly in a state of syncope, and cried out that he was dying. Balls of wadding were placed in succession on the part whence the hæmorrhage proceeded, so as to plug the abscess. This arrested the hæmorrhage; and the pressure was maintained by a bandage.

February 26. The most superficial balls were removed: they were impregnated with healthy pus, and with a small quantity of blood, evidently that which had remained in the cavity of the abscess. The dressing was completed by some turns of a bandage round the neck and under the axilla of the opposite side.

March 3. The whole apparatus was removed with much care. When the deepest plugs were removed, dark blood was observed to exude; and the pulsations of the carotid artery were easily observed at the bottom of the abscess. Compression was carefully applied as before.

March 9. The patient was weak, but going on favourably. The dressings were soaked with healthy pus, and were almost entirely reserved. Some rigors, followed by heat and sweating, had appeared at regular intervals, but were successfully combated by sulphate of quinine. There was no vomiting nor diarrhœa, and the catarrhal bronchitis diminished daily.

March 16. The dressings were renewed: no blood escaped.

March 23. The purulent pouch had almost entirely disappeared, leaving only a superficial wound at the seat of the incision.

June 26. The only trace of the injury was a cicatrix at the anterior border of the sterno-mastoid muscle. The movements of the neck were perfectly free. During the whole course of the disease, the cerebral functions had never been for an instant disturbed.

In their remarks, the reporters observe that all the cases of this description, which have been hitherto related, have proved fatal. They refer to the instances related by Dr. Alexander King of Glasgow, Dr. J. C. Abill, and Dr. R. W. Smith of Dublin. To these we may add the case of Dr. Hale, to which we have already referred.

This case was remarkable for presenting no adynamic symptoms, such as are commonly observed to attend abscesses of the neck, complicated with extensive disorganisation of tissues. There was only an acute abscess, containing healthy pus, and giving rise to no complication.

After the hæmorrhage was arrested there was danger:—1. That the brain would be affected by the inability of the blood to return through the compressed vein; and 2. That consecutive phlebitis might occur, which would be even more dangerous than the rupture of the vein. To these sources of danger, mentioned by the authors, we would be disposed to add a third; viz., the entrance of air through the opening in the vein. We are not aware that this has occurred in any of the cases, analogous to the present one, which have been recorded; but we think it quite capable of occurring.

The authors, in conclusion, remark that such cases as these point out that particular attention should be paid to inflammation and abscess of the neck, arising in the course of scarlet fever.

CANCRUM ORIS SUCCESSFULLY TREATED BY THE LOCAL APPLICATION OF CAMPHOR.

Dr. Deutsch of Nicolai, in Upper Silesia, in an essay on noma, published in the *Journal für Kinderkrankheiten* for January and February 1851, speaks highly of the efficacy of camphor as a local application in this disease. It must be observed, that cancrum oris, in Germany, generally attacks the exterior of the cheek, while in England and France the interior of the mouth is the part mostly affected. After briefly referring to the numerous remedies which have been proposed, but which very often fail in producing recovery, Dr. Deutsch observes:

"Under these circumstances I do not hesitate to mention a remedy, the remarkable operation of which has been observed for several years both by myself and by others; I allude to camphor. The mode of application is as follows. The camphor is rubbed and moistened with a few drops of spirits of wine, so as to form a thickish mass, almost of the consistence of ointment.

This is laid, as thick as the back of a large knife, over the whole surface of the noma, and extending at least one-third of an inch beyond. If there be much secretion, the layer must be removed at the end of an hour, and a fresh one applied; if there be less secretion, it may remain on for two or three hours. The first effect produced by this remedy, is an arrest of the degeneration, which remains at a stand for twenty-four hours or more; during this time also the secretion usually loses in part its offensive odour and its acridity. A positive result now appears; the edges of the sore now exhibit a very evident lively-red line of demarcation, secreting pus; and granulations appear. The camphor now need be no more applied to the edge, but only to the more degenerated interior part; the edge must be dressed with an ointment of oil of turpentine and opium. When the granulations have nearly filled the sore, the camphor entirely falls off, and common dressing may be applied."

Dr. Deutsch illustrates his observations by the relation of several cases, in which the treatment proposed by him had been found effectual after other means had failed.

BORAX AS AN APPLICATION TO GANGRENOUS BUBOES.

At the meeting of the physiological and pathological section of the Medical Society of Vienna on June 18, 1850, Dr. Effenberger stated that he had applied a solution of borax, in the proportion of from one to two drachms in a pint of water, to a large number of patients who suffered from gangrenous bubo, with great success. He had had fifty cases in one year; not one had died, although there were several very severe cases, and in one the femoral vessels were laid bare. The solution was applied by means of charpie, so as to cover the edges of the sore. It was very essential that the charpie should be very frequently renewed by night and day; and to the neglect of this precaution, he attributed the failure of this practice in the hands of other surgeons. (*Zeitschrift der K. K. Gesellschaft der Aerzte zu Wien*, Nov. and Dec. 1850.)

SUBCLAVIAN ANEURISM SUCCESSFULLY TREATED BY LIGATURE OF LEFT SUBCLAVIAN ARTERY: APPEARANCES ON DISSECTION A YEAR AFTERWARDS.

This case, which occurred under the care of Dr. J. M. Warren of Boston, U. S., was reported in the *American Journal of Medical Sciences* for January 1849, and an abstract was given in the Digest of this Journal for April 1849, p. 381. To this abstract we must refer our readers for the peculiarities of the case; merely observing that the subclavian artery was found to run obliquely across the neck, parallel with the edge of the trapezius muscle, and in company with the cervical plexus.

In the *American Journal of Medical Sciences* for Jan. 1851, Dr. Warren states that, on Sept. 14, 1848, nine months after the application of the ligature, the patient was quite well, and had perfectly recovered the use of the arm. The aneurismal tumour had in a great measure disappeared, though more prominent than immediately after the ligature of the vessel. On its surface was a large arterial branch, so incorporated with it as at first to give the idea of a return of pulsation in the whole mass, but which by more careful examination could be separated from it. The pulse at the wrist still remained less strong than in the corresponding artery of the other side. The patient was subsequently seized with typhoid fever, from the effects of which she died, after an illness of three months.

On post-mortem examination, no tumour nor other marks were observed at the point formerly occupied by the aneurismal sac. The vessels and nerves were easily exposed, from the great loss of adipose substance. The subclavian artery, from its origin to the internal edge of the scalenus anticu

maintained its original size ; but here it suddenly terminated. From this spot to the aneurismal sac was extended a flat cord, an inch and a half in length, seeming to be composed of little more than condensed cellular membrane. The aneurismal sac had contracted to a bulbous form, and was about twice the size of the vessel in its normal state ; the enlargement suddenly ceasing at the point where the vessel is embraced by the two heads of the median nerve, and the vessel regaining its natural size. On its surface was the supra-scapular artery, in this case a branch of the transverse cervical, greatly enlarged, and which gave use to the apparent pulsations in the tumour before death. The vessels forming the thyroid axis were of twice their natural dimensions. The internal mammary was enlarged, and given off from the thyroid ; it was apparently through this, by means of the inosculations of the intercostals with the thoracic, and of the posterior scapula with the subscapular, that the collateral circulation had been established.

GLANDULAR ENLARGEMENTS IN THE GROIN AND AXILLA OF YOUNG PERSONS; TREATMENT BY CAUSTIC POTASS.

In a paper on Issues and Caustics, published in the *Dublin Quarterly Journal of Medical Science* for February 1851, Dr. B. G. Darley refers to the form of constitutional or sympathetic enlargement of the glands of the groin, frequently met with in young men, and not the consequence of the venereal virus, but rather the effect of a weakened and cachectic constitution. This tumour is very indolent in its nature ; a long time elapsing before suppuration is established, and resolution is not a common termination. Dr. Darley treats these tumours by making a tolerably sized eschar with caustic potash in the early stage, and covering it with a small poultice. The tumour will be found to have disappeared when the eschar separates.

Allied to this is a tumour often met with in the axilla of young persons. A young man applies for advice, with the arm either in a sling or supported by the other hand, and the shoulder depressed and pushed forward ; and there is much anxiety and suffering in his countenance. If this be treated in the common way, we have to wait long before it suppurates ; and if it be opened, only a small quantity of thick pus escapes. The opening will soon close, and the abscess point in another direction, leaving sinuses which are tedious in healing. Dr. Darley treats such tumours by making a small eschar with caustic potash in the very beginning, when they are hard and indolent. They must not be mistaken for the acute abscess frequently met with in this situation, and easily treated by incision.

EXTIRPATION OF THE GLOBE OF THE EYE FOR A NON-MALIGNANT DISEASE.

Mr A. Prichard, of the Bristol Infirmary relates a case of this kind. The sight of the left eye had been lost for many years, and the patient was harassed with constantly occurring attacks of inflammation, sleeplessness, and intense pain. He attributed the disease to a piece of iron having entered the eye, and which had never been extracted, and which he complained of feeling rolling about from side to side. On a subsequent examination of the eye, no foreign body could be discovered, but the lens had disappeared, and the capsule was collapsed, hard, and opaque. A thick and firm layer of fibrin separated the sclerotic and choroid, through their entire extent, and upon the outer side of the globe of the eye there was a deep oval cavity, as large as a dried horse-bean, and of a very similar form, situated in the middle of the fibrinous exudation. This was probably the cavity of an abscess. This is the first recorded case, as far as is known to Mr. P., in which the eye was extirpated for a disease not malignant. The freedom from the intense neuralgic pain, after the operation, was complete [*Prov. Med. and Surg. Journ.*]

THE HOSPITALS OF LONDON. No. IV.

BY DR. CORMACK AND DR. SEMPLE, ASSISTED BY NUMEROUS REPORTERS.

THE VITAL STATISTICS OF HOSPITALS.

At p. 181, a very important letter appeared on this subject, by Dr. G. Owen Rees of Guy's Hospital. The topic is adverted to in many communications, which have been sent to us by gentlemen who are interested in establishing an uniform and satisfactory system of registering the recoveries and deaths in the different metropolitan hospitals. Though it would still be premature to decide upon the merits of the various suggestions which have been so kindly forwarded for our assistance, we think that it may be useful to give, in this place, the following extract from a letter received from Mr. J. C. Wordworth, Assistant-Surgeon to the London Hospital. "In addition to the points embraced in the table of Dr. G. O. Rees, cognizance ought to be taken of the time which has elapsed between the admission into hospital, and the death of the patient. In small hospitals, and also in the London Hospital, the deaths soon after admission greatly exceed those occurring within the same period in the larger institutions, and in those which receive few casualties. In the London Hospital, from the great number of severe accidents admitted, the number of early deaths is of course very numerous."

ST. THOMAS'S HOSPITAL.

The following is a list of the medical and surgical staff, with the date of each officer's election.

Consulting Physician. Dr. H. S. Roots.

Physicians. Dr. T. A. Barker; Dr. H. B. Leeson; Dr. Risdon Bennett.

Surgeons. J. H. Green, Esq.; J. F. South, Esq.; G. Macmurdo, Esq.

Assistant Physicians. Dr. R. H. Goolden; Dr. D. W. Cohen; Dr. T. B. Peacock.

Assistant Surgeons. S. Solly, Esq., F. Le Gros Clark, Esq.; J. Dixon, Esq.

Obstetric Physician. Dr. C. Waller.

Lecturer on Pathology, with Clinical Duties. John Simon, Esq.

Resident Medical Officer. R. G. Whitfield, Esq.

The site of this magnificent establishment was formerly occupied by a convent, founded by Mary Overie, who was the daughter of a ferryman, and took her name from the nature of her occupation, *over rie, over the river*. She endowed this convent with the money she inherited from her father, together with that which she acquired by following the same calling herself. The convent was converted into a college of priests by a noble lady of the name of Swithin, and, after existing above a century, was burnt down in 1212; and the temporary building, which was erected during its reconstruction, was afterwards used as an almonry for "indigent children and necessitous proselytes", and dedicated to St. Thomas à Becket. In the fifteenth century, St. Thomas's Hospital was munificently supported by the lord mayor and sheriffs of London; but in 1538, it was claimed as church property and surrendered to Henry VIII. Its yearly income, at that time, was estimated at £266:17:6. Henry VIII intended to endow St. Thomas's Hospital for the reception of lame, wounded, and diseased soldiers, and it was to have been designated the Hospital of the Holy Trinity; but his death interfering with this plan, the citizens of London renewed the benevolent design, and, with the sanction of Edward VI, formed a board of inquiry as to the best mode of relieving the miseries of their more unfortunate brethren.

The result, as regards the foundation of St. Thomas's Hospital, was that they purchased of Edward VI the manor of Southwark, which included the site of the hospital, for £647 : 2 : 1. The hospital had been for a short time unoccupied, and was falling into decay, but the citizens repaired and enlarged it in the year 1551, at the expense of £1000, and made it capable of receiving three hundred patients.

In 1552, the following officers were appointed to the hospital, viz. :—A hospitaller, or chaplain, at the annual fee of 10*l.* Clerk, 10*l.* Steward, 6*l.* 13*s.* Butler, 5*l.* Cook, 8*l.* Physicians and chirurgeons, each 15*l.*

About a month before his death, King Edward VI, by royal charter bearing date June 6th, 1553, incorporated the lord mayor and commonalty of the city of London, in succession, as perpetual governors of St. Bartholomew's, Christ's, Bridewell, and the King's Hospital, as this hospital had been designated during this reign ; but it was now styled, "The Hospital of St. Thomas the Apostle".

In 1693 it was found that the hospital was suffering from the ravages of time, and that it would be necessary to rebuild it. Private charity was soon roused to effect this object, and among others, Sir Robert Clayton, lord mayor and president, contributed 600*l.*, and subsequently endowed it by will with 2,300*l.* more ; and Thomas Guy, besides other large donations, rebuilt and fitted up three new wards. By such means the Hospital of St. Thomas became adapted for the reception of the sick, and by the gradual improvements in medical science, became one of the most important schools of medicine in Europe.

It is gratifying to find, that so early as the year 1585 the governors of this hospital set their faces against all jobbing or favouritism in the appointment of their medical officers, as we find by the following minute, dated June 21, 1585. "At this court, Thomas Crowe, son of Wm. Crowe, surgeon, was a suitor for the reversion of a surgeon's room in this house. He was answered that he could have no reversion granted him, for that it is contrary to the orders of this house, but if he be a suitor when any shall fall, and he shall be known to be a fit and able man to take upon him such a charge, that then he shall be favourably considered."

It appears that the surgeons of St. Thomas's were early among the most distinguished members of the profession, holding the office of serjeant-surgeon to the reigning monarchs. In 1641, Edward Moline, one of the surgeons to this hospital, was sent for to York by Charles I, to attend him in sickness ; but, in 1643, he paid dearly for this distinction ; for the president, treasurer, and governors, received an order from the honourable House of Commons then assembled, to displace Edward Moline, one of the chirurgeons of St. Thomas's, from his said place ; for that he was lately taken at Arundel Castle in arms against the Parliament, and for the placing of one Mr. King Clure, chirurgeon, in his place. This said order was read and considered, and in obedience thereunto, "this court doth now order", say the minutes, "that the said Edward Moline shall be and is hereby discharged and displaced from his place as surgeon, but as touching the placing of the said King Clure in the place of the said Edward Moline, it was now also agreed that (before election of a surgeon into the said place) a petition should be drawn and presented to the same honourable House of Commons by the president and governors of this house, to grant their favour, and permit them to confirm Mr. Thomas Hollyer, chirurgeon, who, for fourteen years together, hath him exercised in this hospital, and was formerly a servant to an ancient surgeon of this house, and by the appointment of the said governors, in the absence of this Edward Moline, hath supplied his place for eighteen months this last past". The result of this petition was, that the governors were left to their free election, and Thomas Hollyer was elected accordingly, at a salary of 65*l.* per annum : this sum being granted to him on the following considerations :—for ordinary cures, 40*l.* ; for cutting for

the stone, 15*l.*; and for curing scalled heads, 10*l.* In 1660 King Charles II sent a letter to the president, treasurer, and governors, on behalf of his friend Edward Moline; whereupon the court, after a long debate, "willing to yield all due obedience to his majesty's royal pleasure, and yet withall not to bring a new charge upon this house by employing four surgeons, doth declare that the said Edward Moline be readmitted to his place of a surgeon of this house, as to the cutting for the stone and other ordinary cures, and that the pay of the other surgeons be divided with him until a vacancy should occur, then the number to be again reduced to three". As Mr. Moline, however, was not satisfied with this arrangement, the court eventually resolved that he should be freely and unconditionally restored to his office; and Mr. Hollyer was made a fourth surgeon, with full pay.

The ignorance of the medical profession in the sixteenth century is generally acknowledged, and a very striking proof was exhibited by the difference of opinion which prevailed among the fourteen royal physicians as to the nature of the fatal malady by which Charles II was carried off. The majority of them considered the attack to be apoplectic, but some thought it to be a fit of epilepsy, while others determined to call his complaint a fever, and to administer bark. But, ignorant as the physicians undoubtedly were at this period, it would appear that the surgeons were deemed to be still more so, and they were even forbidden to prescribe, as we find by the following minute in the year 1689. "Ordered that the ancient rule of this hospital, that no chirurgeon shall give any physic to any patient admitted into this house, but that the doctor alone be left to prescribe physic to all patients, be confirmed, and for the future strictly observed". It is, however, curious that, notwithstanding this restriction to the usefulness of the surgeons, we find their important services admitted in the following resolution, passed in 1691. "We are also of opinion that *one* doctor, and *three* surgeons, are sufficient for the service of the hospital".

In the year 1702, the pupils of the hospital are alluded to, under the name of *cubbs*, and we find an order limiting the number of four *cubbs* to each surgeon. This rule continued in force until 1760, and then it was abrogated only in consequence of the example set by other hospitals, as we find by the following resolution: "That as other hospitals are unlimited in the number of their pupils, it be so at the hospitals of St. Thomas's and Mr. Guy's."

To one of the surgeons of St. Thomas's Hospital is due the honour of having first established an HOSPITAL ANATOMICAL SCHOOL. The barber-surgeons of that day were in the habit of giving lectures on "anathomy" in their own hall, but they forbade the pursuit of private "anathomy"; but William Cheselden braved their edicts, and gave lectures on anatomy within the walls of this hospital. In process of time, it would appear that not only were pupils admitted to see the practice of the hospital, but some measures were adopted for securing their attendance, and we accordingly find the following minute made Jan. 27, 1737: "The three surgeons of this hospital having attended according to the directions of a former committee, and upon hearing the account of the manner of examining and certifying for their pupils in this hospital, and looking into the printed form of certificates;—it is ordered that the word 'diligently' in the printed form be left blank in order to be inserted or left out as the occasion shall require."

In 1760, it appears from another minute that pupils were admitted, under proper regulations, to witness the practice of both the Borough hospitals, after they had duly entered at either. It is a pity that these magnificent institutions are not combined, at least so far as medical teaching is concerned. Were they united in this way, and were the teachers well paid from the ample resources at command, and selected solely on the ground of pre-eminent merit, a greater medical college would be the result, than any now existing in London or elsewhere. The continuation of our history we must reserve for another occasion.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.

Consulting Physician. Dr. Farre.
Consulting Surgeon. John Dalrymple, Esq., F.R.S
Physician. Dr. F. J. Farre.
Surgeons. Gilbert Mackmurdo, Esq., F.R.S.; James Dixon, Esq.; George Critchett, Esq.
Assistant-Surgeons. William Bowman, Esq., F.R.S.; Alfred Poland, Esq.

NOTICE OF THE TREATMENT OF CERTAIN CASES OF ENTROPION BY MEANS OF COLLODION. REPORTED BY J. CUMMIN TOSHACH, ESQ.

Collodion has been used at this hospital almost ever since its introduction as a surgical dressing; and though we believe it has been employed in the treatment of certain examples of entropion in other quarters, and perhaps independently, we hope the following notice of so useful an agent will not be deemed out of place, especially as it has been shewn in a variety of instances to be a perfect substitute for the somewhat severe operations, to which patients have hitherto been content to submit for the relief of this most troublesome affection. If we mistake not, it was Mr. Ledger, the intelligent house-surgeon of this hospital, who first suggested its employment to Mr. Bowman, in whose practice we have chiefly witnessed its powers.

The most frequent cases of entropion are those affecting the lower lid in elderly persons suffering from ophthalmia. The spasm of the orbicularis, the forcible squeezing together of the lids, occasions an inversion of the lower one, owing to the relaxation of the integument. The inversion having once taken place, tends immediately and directly to aggravate the ophthalmia and the irritability of the organ, and this to perpetuate and increase the entropion. If the inversion is slight, the margin of the lid is turned against the globe, and the lashes lie flat upon the sclerotica and cornea, rubbing the conjunctiva, but often with less irritation than might be expected, and always with less than is occasioned by that inversion or displacement of the cilia in which their free ends are pointedly turned against the eyeball. If the inversion be still greater, the ciliary border is turned completely over, so that the cilia are bent under and are received as it were against the mucous surface of the lid, in the sulcus which always exists along the lid in consequence of its being rolled inwards upon itself. In this position they give less pain, but in both conditions they constitute a serious source of discomfort, and prevent the cure of the ophthalmia. If allowed to remain for any length of time, they often lead to opacities of the cornea and other secondary disorders.

In this form of entropion an operation has commonly been required, and that now commonly resorted to, consists in removing a horizontally elliptical piece of the integument close to the ciliary border, and closing the gap by fine sutures. Other modes of fulfilling the same indications have been adopted with more or less success, and when patients have been unwilling to submit to any of them, the best substitute, and that a most inefficient one, in many cases, has been the fixing the lid in place by means of a piece of adhesive plaster, which is often difficult of retention, and always unsightly.

The following cases, which are among those that have been treated by Mr. Bowman, will show that the Collodion, properly applied, affords not merely temporary but permanent relief in this variety of entropion.

Case I. J. P., æt. 61, female, presented herself at the hospital, for what she called a cold in the left eye, which had existed twelve or fourteen days, and for the relief of which she had been under treatment at another hospital, where she had given her some eye-water. After attending several times without benefit she applied here. On examining the eye, Mr. Bowman found that the ophthalmia was dependent on an entropion of the lower lid, it being just sufficiently inverted for the cilia with their convex surfaces to rub against the ocular conjunctiva. Mr. Bowman, on turning his attention to the right eye, observed that there was in this eye also an entropion, but

without much accompanying ophthalmia: the inversion in this eye being complete, the cilia were not rubbing against and irritating the conjunctiva, but were lodged in a longitudinal sulcus extending the whole length of the lid, and corresponding to the attached border of the tarsal cartilage.

For the relief of the ophthalmia in the left eye, collodion was applied to the lower lid, in the manner and with the precautions to be presently mentioned. It was also applied to the right lower lid, to restore it to its natural position. No other remedies were employed. She left with directions not to rub the collodion off; and in two days afterwards the patient came with the ophthalmia in the left eye quite well, and no inversion. On the right side, the tendency to inversion was much diminished, and the collodion was applied again. This application was successful.

Case II. J. L., ætat. 70, an old man, was to have an artificial pupil made in his right eye. On presenting himself for operation, it was found there was an entropion of the lower lid, and considerable concomitant ophthalmia. In this state of things, it was impossible to think of proceeding with the artificial pupil. Collodion was therefore applied to the lower lid, and the patient, living some distance out of town, was told to return in a week, which he did; when the ophthalmia had entirely ceased, and the entropion was no longer present. After being in the hospital two or three days, the artificial pupil was made, without any undue inflammation following the operation. In this case, had the collodion not been used, it would have been requisite to have removed a portion of skin, as in the ordinary operation for entropion, previously to attempting to make a new pupil; but by a very simple means surgical interference was obviated, and a painful proceeding, often submitted to with reluctance, was rendered unnecessary.

In the following case it failed, through the neglect of the patient to have it replaced at the proper time.

Case III. R. M., æt. 70, had had entropion of the right lower lid for six weeks, with ophthalmia, when the collodion was applied on the 24th March, 1850. On the 4th April it still adhered effectively, and the inversion was prevented. He did not come again till the 18th April, when the collodion had been displaced several days, and the eutropion had returned. It was then replaced, and also on the 2nd and on the 9th of May; and for the time gave complete relief. After this he stayed away three weeks, during which the entropion returned under a fresh attack of ophthalmia; and as there was no prospect of his being able to come at more frequent intervals, to have the treatment efficiently carried out, Mr. Bowman recommended him to submit to the removal of a piece of the integument in the ordinary way, to which he readily consented, and by which he was cured.

There are other cases of entropion, the result of aggravated or long continued ophthalmia, with much photophobia and lacrymation. The following examples will show that these also are amenable to the collodion treatment.

Case IV. S. L., æt. 39, female, states that five months prior to applying to this hospital (January 20, 1851), her eyes became suddenly bad; that she had been under treatment all that time without any benefit. The right eye was the worst, in which she states there had been an inversion of the lower lid since the commencement. She has at present great intolerance, and profuse lacrymation. There is an opacity covering the upper part of the cornea of the right eye. When she first presented herself she was ordered a blister behind the right ear, and some lead lotion. On the 27th, collodion was applied to the right lower lid. On the 30th, she came back, with the collodion displaced and the entropion restored; but the collodion was reapplied on that day, and on three occasions afterwards, at intervals of three days; when, on the 10th of February, she is much improved; and on the 24th of March she comes with the entropion cured, the opacity of cornea alone remaining. From the 27th of January she had been taking gr. j of quinine twice a-day.

For the following we are indebted to Mr. Bowman's notes of cases in private practice.

Case v. 19th December. Miss ——, æt. 13, from the age of six has suffered twice annually from an attack of ophthalmia, with intolerance. For the last three years has had constant and extreme intolerance, so as hardly ever to open the eyes. Skin cold ; pulse languid. Is thin, and grows fast. Bark does not agree with her. Has taken steel and various remedies, under different practitioners. On examination, the right lower lid is found inverted, the left conjunctiva is red in parts, but neither globe can be rendered visible. Tincture of iodine on outside of lids. Cod-liver oil 3 j to 3 iv twice daily. Exercise three times a day in all weathers, well clad. A brine bath at 70 degrees F. every morning, followed by friction. Plain nutritious diet.

January 15. Is much better in health. Spirits and complexion better, and is more muscular. The right lower lid is still inverted, but the eyes are more often open for an instant, and are less injected. I got a view of the two corneæ : the right nearly clear, slightly rough at the margin ; the left a little rough and dull near the pupil. Her mother says they have not been seen for two years before. To continue the same treatment.

January 25. The amendment continuing, and the spasm and photophobia lessened. I put collodion below the tarsal border of the right lower lid, averting the lashes.

February 13. The entropion was cured by a single application of the collodion. When the collodion came off at the end of a week, the inversion once showed a tendency to return ; but the lid was immediately 'righted' by the mother, and no further displacement has occurred. Rep. Syr. Fini Iodid. ʒ j twice daily.

March 12. The entropion appears quite cured. Her general amendment goes on under the same remedies.

In the application of collodion for the relief of entropion, certain precautions are to be observed ; otherwise it may fail in its intended effect.

1st. The collodion itself should not be too dilute. It should be thick and syrupy ; in short, it should be concentrated.

2nd. Care should be taken that the surface on which it is to be applied is properly *dry*, and free from any moisture : therefore it is always necessary to wipe the surface before application ; otherwise it will not adhere with any degree of firmness, but will soon fall off. With attention to the above caution, it adheres very firmly. There are, however, many cases in which the outer surface of the inverted lid is excoriated by constant wetting by the tears ; in which it is desirable to delay the application till this worst state is relieved. A few days are usually sufficient for this purpose.

3rd. During the application, and while evaporation is going on, the position of the head should be attended to. The vapour may irritate the conjunctiva, and a slight increase in the flow of tears take place. To prevent these flowing on to the collodion at the time of its application, it is necessary that the head be inclined to one side, so that the tears may drop from one corner of the eye, and not run over the lid and cheek.

It does not seem very important how much of the integument is covered by the collodion, so long as the contraction is sufficient to remedy the inversion ; and the best way to judge of this, is to bring the lid into place, and raise the skin from the cheek towards the tarsal border, before commencing the application of the collodion. It is necessary to apply it close up to the ciliary border, in order to produce the contraction along that border. If this be done, it is less essential to smear it far down towards the cheek. Where the integument is very lax, a very considerable surface of it may be covered.

With these precautions in view, the application is proceeded with as follows. The lid being restored to its natural position, it is held there while the collodion is being applied, by making gentle traction outwards on the integument below the outer canthus. In this way the skin of the lower lid is horizontally grooved, while at the same time it is left exposed, so as to be free to receive the collodion. It should be held in this way till the collodion has contracted at least to such a degree as may be sufficient to maintain the

right position of the lid during the further stages of the contraction. Very often one application of the collodion is sufficient to cure an entropion; but if a tendency to return manifests itself, it must be repeated at intervals of three or four days or a week.

It must be remembered that the collodion is not proposed as a cure for every case of entropion. In those forms which depend on contracted cicatrices or a distorted cartilage, when the tarsal edges may be irregular or much thickened, the ordinary modes of cure by operation must still be resorted to, but confining the treatment by collodion to those forms which are recent and uncomplicated with serious structural change, it will be found that it is an invaluable means of remedying a great and troublesome deformity.

[The historical notice of this hospital, the oldest and largest of the ophthalmic hospitals of this kingdom, is necessarily deferred to a future occasion.]

MISCELLANEOUS INTELLIGENCE.

Sale of Arsenic Regulation Act. The principal provisions of this Act, which was introduced by the Earl of Carlisle, and has recently passed, are as follows. The seller of any quantity of arsenic must enter in a book, kept for the purpose, the name and residence of the purchaser, and the purpose for which he alleged he wanted the article: the purchaser must also, in all cases, sign his name, and, except in certain cases, the arsenic should not be sold except in presence of a witness. With the view of preventing accidental poisoning, it has been proposed to add some foreign colouring matter to the arsenic, so that it may not be mistaken for flour, meal, carbonate of soda, or the like. But as the introduction of foreign matters might interfere with some of the purposes to which arsenic is applied in arts and manufactures, it is determined that no person shall sell less than ten pounds weight of uncoloured arsenic, unless it were stated by the purchaser that he wanted it for some purpose in which the introduction of an adventitious colour would be injurious. It is proposed that soot be employed as the colouring matter. *Arsenic is to be sold to none but male adults:* and where less than ten pounds of uncoloured arsenic is required, there must not only be the signature of the purchaser, but also the presence of a witness known to the seller.

APPOINTMENTS.

Elin, George, Esq., appointed House-Surgeon to the Birmingham General Hospital.

Hutton, Dr. Charles, elected Physician-Accoucheur to the General Lying-in Hospital, York Road, in the room of Dr. James Reid, resigned.

Lonsdale, E. F., Esq., appointed Surgeon to the Orthopædic Hospital.

OBITUARY.

Allan, James, M.D., Deputy Inspector-General of Hospitals and Fleets, Surgeon to Haslar Hospital, at Portsmouth, aged 58, on 18th March.

Bowie, John James, M.D., at Bentinck Terrace, Regent's Park, aged 31, on 12th March. He was for several years one of the Assistant Physicians to the Hospital for Consumption at Brompton, but resigned his office about a year ago, in consequence of ill health. His disease was phthisis pulmonalis, though at first it assumed a different character.

Inglis, James, M.D., formerly Physician to the Ripon Public Dispensary, at Green Royde, near Halifax, aged 37, on 8th March, of disease of the heart.

BOOKS RECEIVED.

Acton on Diseases of the Urinary and Generative Organs. Second Edition. London: 1851. Battersby (Dr. F.) on Chronic Hydrocephalus. (From *Edinburgh Med. and Surg. Journal.*) Edinburgh: 1851. Bird (Dr. Golding) Urinary Deposits. Third Edition. London: 1851. Cotton (Dr. R. P.), on Phthisis and the Stethoscope. London: 1851. Index to first thirty-three volumes of Medico-Chirurgical Transactions. London: 1851. Lallemand on Spermatorrhœa:

translated by McDougall. Second Edition. London: 1851. Neligan on Medicines. Third Edition. Dublin: 1851. Non-Medical Essay on Cholera. London: 1851. Pharmacopœia ad usum Nosocomii Phthisicorum, etc., accommodata. Londini: 1851. Pharmacopœia Collegii Regalis Medicorum Londinensis. Londini: 1851. Religion and Science, Connexion of, and Independence of each other. Manchester: 1851. Robertson on the Physiology and Diseases of Women; and on Midwifery. London: 1851. Snow (Dr. John), Letter to Lord Campbell on the Chloroform Clause in the proposed "Prevention of Offences Bill". London: 1851.

TO CORRESPONDENTS.

TYPHUS AND TYPHOID FEVER.

To the Editor of the London Journal of Medicine.

Hull, March 6, 1851.

Sir,—I was under a mistake, it appears, in ascribing to Dr. Wm. Jenner the opinion, that "occasionally, though very rarely, in typhoid fever with the rose rash, the follicular lesion is wanting". Nevertheless, I believe the opinion, apart from *his* authority, to be correct. As Dr. Watson distinctly asserts the same pathological truth, I think it probable I may have had the following passage from his Lectures in my mind, which I inadvertently confounded with the statements of Dr. Jenner. After describing the *spotted* or *rubeoloid* epidemic fever of 1838, Dr. Watson adds,—"I have looked for them (ulcers in the bowels) in many cases that have proved fatal in the Middlesex Hospital, and have discovered *neither ulceration nor any other apparent change in the follicles of the intestines. Still, in my own experience, such ulcers have been vastly more often present than absent.*" (*Watson's Lectures on the Practice of Physic*, 1st ed., vol. ii, page 689.) By inserting this explanation in your next Journal, you will much oblige,

Sir, yours faithfully, Humphry Sandwith.

Physician to the Hull Infirmary.

Pneumonic Paralysis. We have received the following letter from Mr. Thos. Underhill, Jun., and shall be glad to receive information on the same subject from those who have it to give.

To the Editor of the London Journal of Medicine.

Tipton, Staffordshire, 27th February, 1851.

Sir,—I have read with much interest in the London Journal of Medicine for this month, p. 163, your account of Dr. Macario's paper on what he terms "Pneumonic Paralysis"; and as the two cases recorded in that paper are very similar to one which has lately occurred in my practice, I am induced to forward to you the following notes.

Richard ——, aged 44, a labourer, of delicate constitution and nervous temperament, was seized on the 20th December, 1850, with acute pneumonia, commencing in the lower part of the left lung, and rapidly involving the whole of that organ. The symptoms soon assumed a typhoid character, as was anticipated from the constitution of the patient and the extent of the disease. There was some, but not much, delirium. I applied a large blister to the affected side; and in other respects adopted the ordinary treatment. On the 27th, he was decidedly convalescent. On the 28th, I found the improvement going on; he said that he had slept well, perspired freely, and expectorated copiously. There was a very distinct subcrepitant rhonchus. When I proceeded to feel his pulse, *he gave me his right arm, telling me at the same time that he could not move the left;* and that he supposed he had lain upon it. Upon examination, I found that the left arm was completely paralysed. He had no giddiness and no headache. Sensation was not impaired in the hand or arm; there was neither a feeling of numbness, nor of tingling; but when I raised the arm, it fell back upon the side like a dead weight. I directed daily friction of the limb with a stimulating liniment. On the 6th of January, 1851, he was able to walk about within doors; and with the exception of complete persistence of the paralysis as described, he was going on most favourably. On the 12th of January, he announced to me that he was able to move his fingers. On the 16th he could move the wrist-joint, though with difficulty; on the 20th he could bend the elbow. The arm gradually got stronger; and on the 20th of February he resumed his ordinary occupation.

I do not offer any remarks upon the complication of the pneumonia with paralysis. The relation (if any) between the two affections can only be solved by those who have large opportunities in hospitals of observing the former disease.

I am, Sir, your obedient servant, Thomas Underhill, Jun., M.R.C.S.Eng.